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CULTURAL RESOURCES RECONNAISSANCE INVENTORY OF
PORTIONS OF THE EAU GALLE RECREATION AREA,
ST. CROIX COUNTY, WISCONSIN

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FINAL REPORT

CULTURAL RESOURCES RECONNAISSANCE INVENTORY OF PORTIONS OF THE
EAU GALLE RECREATION AREA, ST. CROIX COUNTY, WISCONSIN

by

Robert F. Boszhardt

Reports of Investigations Number 3
Mississippi Valley Archaeology Center

at

The University of Wisconsin-La Crosse

Submitted in partial fulfillment of Contract
DALW 37-82-M-2096 for the St. Paul District, U.S.
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James P. Gallagher
James P. Gallagher
Principal Investigator



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ABSTRACT

A cultural resources reconnaissance inventory of selected portions of the Eau Galle Recreation Area was conducted in an effort to relocate and assess the condition of eight previously reported archaeological sites, and to survey surrounding areas. Through systematic shovel testing, five of the eight sites were positively relocated. Two of these sites were found to be outside of Corps of Engineers managed property, and two others were found to be affected by ongoing erosion. Three previously unreported sites, one prehistoric and two historic, also were discovered. Recommendations for additional work at seven of the sites are provided.

INTRODUCTION

On the weekends of October 16-17 and 23-24, and on November 6, 1982 Mississippi Valley Archaeology Center personnel conducted a cultural resources reconnaissance inventory of specified portions of the Eau Galle Recreation Area under Purchase Request DACW37-82-M-2096. This contract was let by the St. Paul District Corps of Engineers in partial compliance with several federal cultural resource regulations dating back to 1966. Specifically, the project scope of work called for relocation of eight previously reported sites and assessment of their present conditions. In addition, four areas encompassing seven of the eight reported site locations were to be surveyed in order to locate and assess any additional cultural resources.

During the 1982 investigations a total of 33 man days were employed in the field to accomplish the goals outlined above. Dr. James P. Gallagher (Executive Director of the Mississippi Valley Archaeology Center) served as Principal Investigator for the project. Robert Boszhardt, Staff Archaeologist for the Center, served as field and laboratory supervisor.

The Eau Galle Recreation Area encompasses 540 acres in the townships of Eau Galle (Sec. 36, T28N, R16W) and Cady (Sec. 31, T28N, R15W) in St. Croix County, Wisconsin, and Spring Lake (Sec. 6, T27N, R15W) in Pierce County, Wisconsin (Figure 1). This area is managed by the St. Paul District Corps of Engineers, and centers on the Eau Galle Reservoir. The reservoir

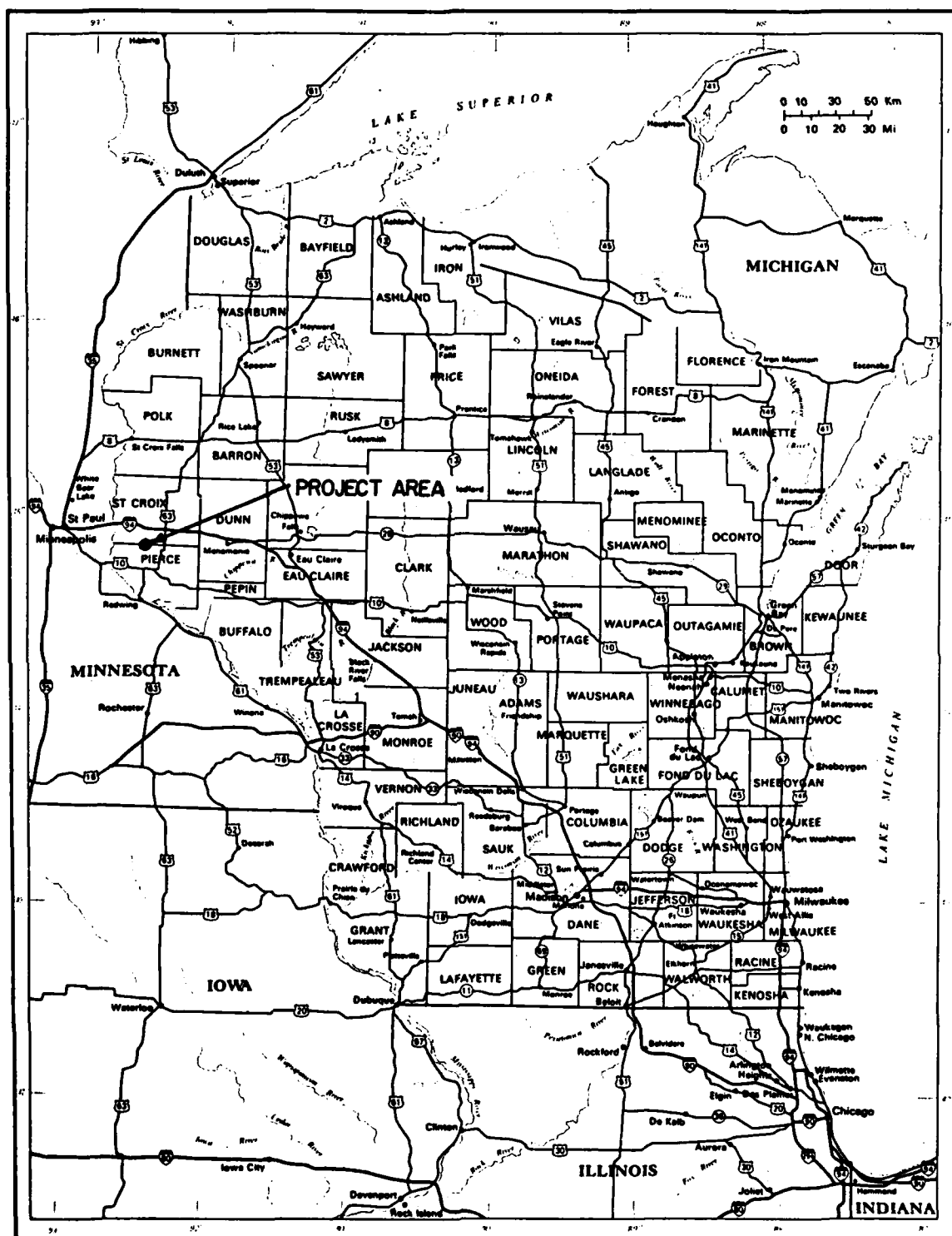


Figure 1. Location of Eau Claire Recreation Area in Wisconsin

is artificially ponded behind a dam located just to the north of the town of Spring Valley, Wisconsin. The dam was constructed between 1965 and 1969, for flood control purposes.

At normal level (940 feet), the Eau Galle Reservoir occupies 150 of the 540 acres. The reservoir level has fluctuated to varying degrees since the completion of the dam in 1969. The fluctuating water level is caused by precipitation in the form of local rain within the Eau Galle drainage basin, and snow melt. Usually the reservoir level has risen and dropped only a few feet; however, staff members at the Recreation Area report that more intense weather conditions have occasionally raised the level considerably.

ENVIRONMENTAL SETTING

The Eau Galle Recreation Area is located in the northwestern portion of the Western Upland Geographical Province of Wisconsin (Martin 1965:33). The Western Upland is characterized by steeply dissected topography and dendritic drainage patterns. The northwestern portion of the province is distinct from most of the Western Upland in that this section was subjected to glaciation.

The Eau Galle Recreation Area is situated at the confluence of French, Lousy, and Lohn Creeks and the Eau Galle River. The Eau Galle River flows primarily to the southeast, and is a tributary of the Chippewa River. The steep-sided valleys of the drainages entering the Eau Galle Reservoir contain bedrock exposures of the Lower Magnesian formation. This limestone/dolomitic formation contains chert that is often identifiable because of its oolitic nature.

The topographic relief within the recreation area is nearly 200' (from 940' ASL in the valley bottoms to 1120' on the uplands). As suggested above, the upland soils contain glacial drift. The valley bottoms are flat and wide in comparison to the small stream channels. The channels are crooked, with numerous meander scars. Reworking of the valley bottoms is apparent from bank erosion; however, the rate of cutting and redeposition is unknown. Comparison between the stream channel configurations recorded on 1965 air photos and those at present show

minimal change.

The stream beds are rocky, with both blocky eroded bedrock fragments and rounded glacial till cobbles. The streams appear to carry little sediment and, based on previously reported prehistoric finds on the surface of the valley bottoms, soil accumulation in the valley bottoms from upland erosion apparently has been minimal.

Reconstructions of the original vegetation for the townships encompassing the Eau Galle Recreation Area indicate that prior to the severe changes caused by Euro-American settlement, the land supported a forest comprised of sugar maple, basswood, red oak, white pine, and black oak, with some yellow birch, and red pine (Finley 1976). The project area is a short distance south of the vegetative tension zone, which is a transitional ecotonal band between Oak Savanna and Prairie regions to the southwest and mixed coniferous hardwood forests to the north. (Curtis 1959:15-23). Curtis describes the forest type in the Eau Galle area as southern mesic (1959:103-104). This forest type is distinctive in that the constituent species are extremely shade tolerant. In essence, from spring to autumn the forest floor in southern mesic forests is virtually devoid of direct sunlight. However, patches of open canopy typically occur. Of potential significance for prehistoric human occupation in a southern mesic environment is the abnormally high surface temperature that is created by a dense mat of leaf litter on the forest floor. Curtis reports that in early spring, prior to leaf budding, surface temperatures in southern mesic forests reach temperatures as high as 120-130°F. The warm surface and insulating effect of the leaf litter is also apparent in colder seasons, to the extent that it may prevent ground freezing or thawing, and may cause snow to melt more rapidly than in different vegetation communities (1959:123).

The present-day vegetation cover of the Eau Galle Recreation Area scarcely resembles the original vegetation. This change is primarily a consequence of drastic alterations from Euro-American land use practices. Prior to the purchase of the area for flood control purposes, nearly all of the land except for steep slopes was under cultivation. These cultivated areas included much of the valley bottoms and the uplands.

The Spring Valley region was not actively settled until after 1860

(Brown 1971). Beginning with the Euro-American settlement of this area, land clearing started almost immediately with cutting of the forest. This, in turn, opened the land to less shade-tolerant species, and altered the pre-agricultural vegetation community. Subsequent farming undoubtedly increased erosion from the uplands and along the stream channels. Only the steep valley sides would have been spared these alterations; however, farm access roads from the valleys to the uplands, and wood cutting along the slopes, also has disturbed the vegetation to some degree.

Cultivation in the Eau Galle Recreation Area itself ceased in about 1965 with the beginning of dam construction. This construction lasted until 1969, and resulted in intense land disturbances at specific locations. An aerial photograph from 1965 illustrates some of the land alterations from construction-related activities, including quarrying, filling, temporary road building, and pipe line cutting (see page 8).

Since the completion of the Eau Galle dam in 1969, 150 acres of former valley bottom have been permanently inundated. Except for relatively minor recreation facilities developments since that time, the remainder of the area has been left to natural recovery processes. The present-day vegetation of the Eau Galle Recreation Area is an example of plant succession, with pioneering weed species yielding to more woody secondary species. This is most readily apparent in the valley bottoms, which were formerly cleared for agriculture. In these areas goldenrod, milkweed, brambles, and other weedy plants dominate the ground cover. However, occasional thorny herbaceous plants and secondary growth trees such as box elder saplings are also visible. Along the bases of the hill slopes, box elder and poplar trees become increasingly more common, and eventually the valley bottom fields merge with the more established valley wall forests. Mature trees in the forested hill slope areas today are white pine, sugar maple, basswood, and oaks. These areas reflect the original vegetation of the entire area.

The soils of most of the surveyed areas are characteristic of floodplain deposits in this region. The flat valley bottoms contain two soil types: Fluvaquents and Huntsville Silt Loams (Longston 1978). The texture of these soil types ranges from sandy loams to silty clay loams. Fluvaquents typically are stratified silts and fine sands that would have

supported wetland grass and sedge and some willow and elm. Huntsville Silt Loams are occasionally flooded and would have supported native vegetation of prairie grass. One area, an alluvial fan at the base of a steep hillside, has Otterholt Silt Loam (12-20%) (Longston 1978). This soil type is characterized by developed silt loam horizons that would have supported sugar maple, red oak, basswood, and white pine.

PREVIOUS INVESTIGATIONS

Prior to the construction of the Eau Galle Dam, the National Park Service funded three archaeological investigations of the area that was to be affected by construction and inundation by the reservoir. The first of these studies was a survey undertaken by the State Historical Society of Wisconsin in 1962. An unpublished report (Buck and Thygesen n.d.) briefly describes 15 archaeological sites which were located during the 1962 season. Four of those sites (Sc 11, Sc 20, Sc 21, and Sc 22) were reinvestigated in 1982, and are described in later sections of this report.

The 1962 investigators were unable to survey the entire proposed reservoir area for several reasons, including uncultivated land and landowner denial of access to property. However, an additional unpublished manuscript entitled "Notes on property owners and condition of property in the Eau Galle, July 1962" describes the condition of the areas that were not surveyed, and recommends additional work at the reservoir.

In 1964, the State Historical Society of Wisconsin was again contracted by the National Park Service to conduct survey on additional lands on the proposed reservoir, and to place test excavations at several sites. The report from the 1964 field season describes the testing and location of ten sites that had not been located in 1962 (Kerr 1965). Kerr's report also repeats much of the information from the 1962 survey. The 1964 survey team rechecked at least three (Sc 11, Sc 20, and Sc 21) of the four sites that were reported in 1962 and that were to be investigated again in 1982. In addition, Kerr first reported the remaining four sites (Sc 23, Sc 27, Sc 32, and Sc 35) that were reinvestigated in 1982. Testing was conducted at Sc 11 and Sc 23.

The final archaeological investigations at Eau Galle Recreation Area

were intensive excavations at Sc 25, the Lamb-5 Site, in 1966. This work was also conducted by personnel from the State Historical Society of Wisconsin, and the results were published by Brandon (1968). Although the Lamb-5 Site is not directly relevant to the 1982 investigations, the report is informative in ascertaining the cultural and chronological affiliations of the Eau Galle sites. At Sc 25, a Late Archaic component was identified underlying a probable Late Woodland occupation. The closing paragraph of Brandon's report summarizes the cultural identities of all the sites located at the Eau Galle Reservoir during the 1962, 1964, and 1966 investigations:

"The site is typical of all the sites that are known for the Eau Galle Reservoir area. In addition to the sherd described in this paper, only one other (non-diagnostic) sherd was found in the valley during the entire course of two summer's intensive reconnaissance. It appears then, that the Eau Galle Valley was never intensively occupied by prehistoric Indian populations. On the basis of the sites investigated and the material recovered from them, all appear to be of the Archaic stage, with no evidence of Paleo-Indian groups, and little evidence for Woodland occupations, with the exception of the post-Archaic component at Lamb-5." (1968:30).

The 1960's investigations at the proposed Eau Galle reservoir were conducted while much of the land was under cultivation. Unfortunately, many of the land marks (e.g., fields, roads, buildings) that were utilized to report the site locations have been obscured or destroyed by the reservoir and recreation area.

METHODS

Literature and Records Search

Prior to the 1982 fieldwork, a records search was conducted in order to obtain as much information as possible about the 1962 and 1964 investigations. This information was essential for relocating the eight sites and for evaluating the previous coverage of the designated survey areas. This records search necessitated a trip to the Museum offices and the

Division of Historic Preservation at the State Historical Society of Wisconsin in Madison, which houses the field notes and reports from the 1960's work, as well as the Wisconsin Archaeological Codification File. These records were reviewed, and copies were made of pertinent information for field and laboratory use.

The records from the 1962 and 1964 investigations are imprecise in reporting specific site locations and the methods used in survey and testing. As noted earlier, many of the landscape features that were used to report the site locations in the 1960's are no longer in existence, or have been altered. Given the two decades between the initial investigations and this study, however, the problems encountered in using the 1960's records are not surprising. Adding information from other contemporary land use records to the archaeological information clarified many of the problems.

The most informative site location record from the 1960's archaeological work at Eau Galle is an enlarged copy of sections of the pre-reservoir U.S.G.S. topographic maps (Baldwin and Knapp 15' quadrangles, 1949), on which the site locations are plotted (Figure 2). This base map shows the approximate locations of all of the sites reported in 1962 and 1964, in relation to the basic geographical features of the recreation area.

Two sets of 1965 aerial photographs for the sections encompassing the Eau Galle Recreation Area also were obtained, which further clarified the locations of landscape features mentioned in the site descriptions. One set of 1965 aerial photographs is on file at the Manager's office at the Eau Galle Recreation Area. These photographs were taken prior to the beginning of the dam construction and indicate field boundaries, buildings, and creek channel configurations (Figure 3). A different set of aerial photographs taken later in 1965, after the beginning of construction, were obtained from the St. Croix County Agricultural Stabilization and Conservation Service Office in Baldwin, Wisconsin. This latter set shows land alterations from the dam construction as well as field boundaries, buildings, and creek channels that remained undisturbed (Figure 4).

The enlarged U.S.G.S. topographic map showing the approximate site locations, together with the aerial photographs taken only one year after the 1964 investigations, made the initial site descriptions much more

Figure 2. Enlarged pre-reservoir topographic maps with plotted location of sites reported from 1962 and 1964. (From unpublished early SHSW survey notes on file in the Anthropology Section of the Museum Division, SHSW).

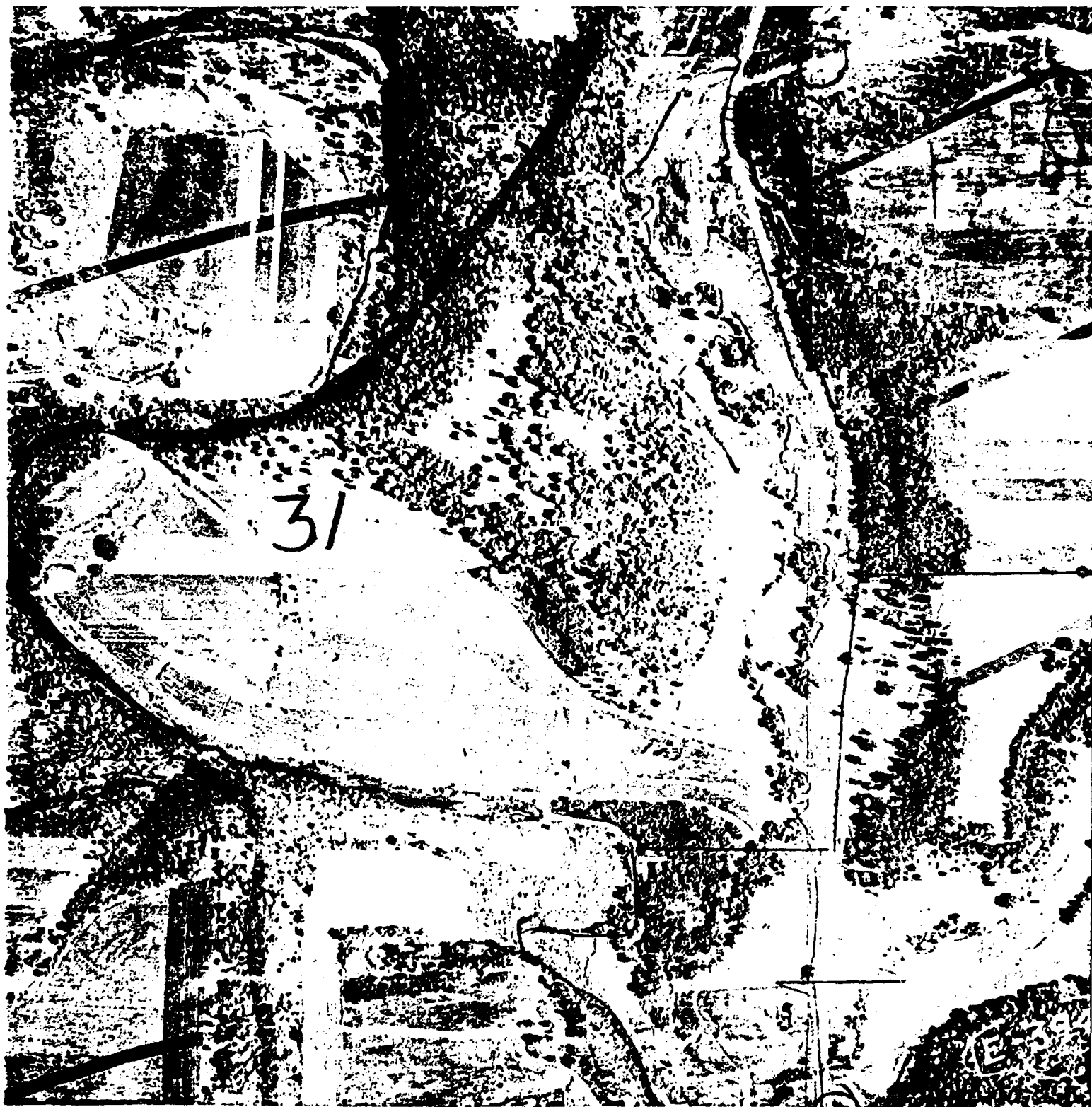


Figure 3. 1965 Aerial photograph of sections encompassing the proposed Eau Galle Reservoir.



Figure 4. Aerial photograph of sections encompassing the proposed Eau Galle Reservoir during initial reservoir construction.

clear, and allowed close approximation of the reported site locations. These locations were plotted on 1973 aerial photographs, which were provided by the St. Paul District Corps of Engineers. The landscape depicted on the 1973 aerial photographs is very similar to that of the recreation area today.

Field Methods

Due to the ground cover conditions described earlier, the primary field technique employed was shovel testing at 15-meter intervals. The shovel test holes averaged 35-40 cm in diameter, and were excavated into what were judged to be sterile soil horizons. All soils from the shovel tests were screened through $\frac{1}{2}$ -inch mesh hardware cloth. Records were kept on location, soil type, depth, and materials encountered for each shovel test. The locations were assigned a survey area letter, transect number, and hole number. These proveniences were plotted on a set of 2' contour maps obtained from the Eau Galle Recreation Manager's office.

Soil types were recorded by stratigraphic horizons, color (Munsell), and texture. Within an area, if the same soil type was exposed in more than one hole, the soil type and depth were recorded for each subsequent hole, but Munsell readings and measurements for each horizon were not taken. All test holes were backfilled before the survey crew left each area.

In certain places, the interval between shovel holes was intentionally adjusted according to field judgment. For example, if a survey team entered the approximate location of a recorded site, and materials were not encountered in the 15-meter interval, the spacing was decreased to 7.5 or 5 meters between test holes. Reduced intervals were also employed in areas where no previously recorded site was known to exist, but where evidence suggestive of cultural remains was encountered in the pits placed 15 meters apart. Either the interval between shovel holes was expanded to 30 meters, or pits were not excavated at all, in areas where records or initial reconnaissance indicated that the soils had been badly disturbed. Such disturbances were encountered in places where stream action had reworked the soils, and at dam-related construction areas.

As an archaeological survey technique, shovel testing has numerous

limitations. First, employing a systematic 15-meter interval between shovel holes exposes only an extremely small percentage of the survey area. Therefore, the sample of the survey area which is actually examined is minimal. It is generally acknowledged that archaeological sites may be located utilizing the shovel testing technique; however, if no evidence of cultural remains is observed in the shovel test sample, it cannot be stated that a site does not exist within a survey area. Second, it is difficult to maintain vertical control over the contexts of materials recovered during the excavation of the shovel hole. (Vertical control may be established if shovel hole walls are scraped with a trowel, and materials are then encountered from in-situ contexts.) Thus, when a site is located through shovel testing, follow-up test excavations are usually needed to identify the nature of the cultural deposit. Third, depending on surface cover and soil types, shovel testing (including screening of the soils) is a time-consuming endeavor. Shovel testing is basically an inefficient survey technique in terms of sample size and cost efficiency; however, in vegetated survey areas with little or no exposed ground, it is the best method currently available.

Soil corings were placed intermittently throughout the survey areas in order to identify disturbed soils and sterile soil horizons. These corings were made with either a 3-inch diameter bucket auger or a standard 1-inch diameter soil probe.

Visual inspection of exposed ground was also employed as a survey technique wherever possible. This technique was practical only in a few areas of eroding creek banks, eroding shoreline along the reservoir, and pasture lands where cattle paths and rodent burrow spoil piles provided some exposed ground.

For convenience, the project area was divided into five areas, based on physiographic separation. These areas were treated as distinct units, and designated Area A-E. Full descriptions of the location, condition, survey methods employed, and results for each of these areas follows. (Figure 5).

Laboratory Analysis

Much of the laboratory time expended on the project involved comparison of the enlarged U.S.G.S. topographic maps, on which the State Historic-

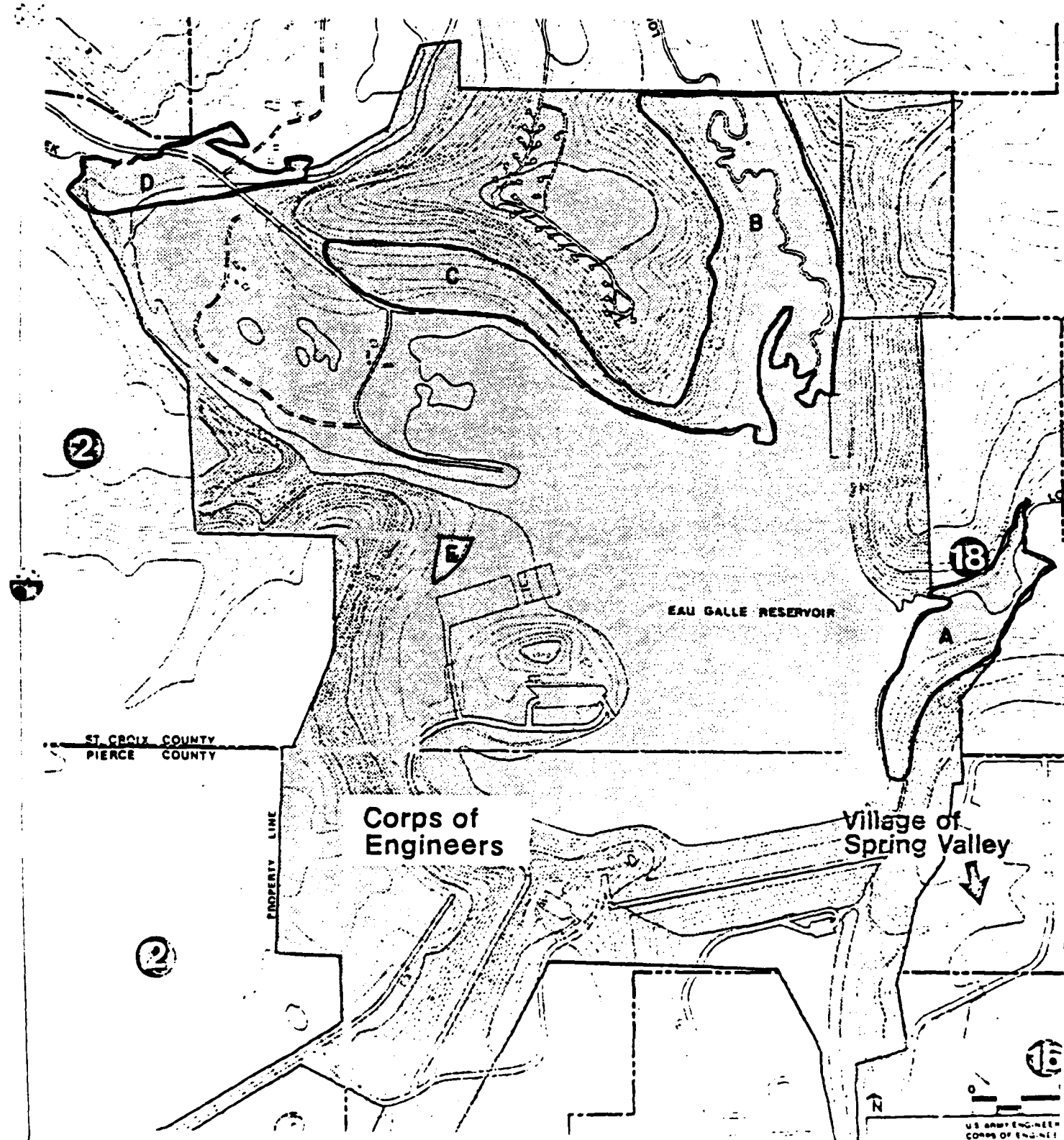


Figure 5. Survey Areas A-E at the Eau Galle Recreation Area.

al Society archaeologists had plotted the sites they located, with the two sets of 1965 aerial photographs, the 1973 aerial photograph, and the two-foot contour map of the Recreation Area. These maps and photographs were examined in detail to better enable an accurate approximation of the previously reported sites, and for plotting the 1982 shovel test transects. These visual records were coordinated with the original survey records and site descriptions. In addition, the maps and photographs offered informative suggestions about the nature of land alterations since the original surveys of the reservoir area.

Because only lithic debitage was recovered during the survey, laboratory analysis of the materials was not elaborate. The artifacts were washed and visually examined for evidence of intentional reworking or use. No diagnostic artifacts were recovered, and therefore, cultural affiliation of the site assemblages could not be determined.

The Mississippi Valley Archaeology Center has recently initiated a catalog system that will allow an inventory of the entire collection at the Center to be incorporated into the University of Wisconsin-La Crosse computer facilities. The materials from the Eau Galle Recreation Area survey have been assigned catalog numbers according to this system. An explanation of this system and a listing of the catalog numbers for the Eau Galle materials is provided in Appendix B.

RESULTS

Survey Area A

Description

Survey Area A is defined as the valley bottom of Lohn Creek below an elevation of 949 feet. The Corps of Engineers actually owns only the western third of this area, with the eastern two thirds controlled as a high water easement. The high water easement is owned by Kenneth Larson, and is used as cattle pasture. The Corps-owned portion of the area is covered with pioneer and secondary growth vegetation that has replaced the pasture since the construction of the Eau Galle Dam.

Area A is bounded by steep-sided hills on the north and south, by the reservoir to the west, and to the east by the unmarked 949-foot

contour. In the northeastern portion of the valley bottom, the 949' contour is difficult to judge, as the floor of the creek bottom rises gradually. However, to the south and east of a large meander loop, the boundary is clearly marked by the base of two twenty-foot rises. These rises are truncated alluvial fans derived from a large ravine to the southeast of the survey area. The valley bottom is approximately 140 meters wide and the survey area is 365 meters long (12.6 acres).

Lohn Creek runs along the northern boundary at the base of the slope through much of this area; however, a large southeasterly meander loop occurs within the high water easement. The creek banks are eroding throughout much of the area, and within the high water easement, channel scarring is readily apparent. Within the Corps of Engineers portion of the area, a large section along the base of the slope at the southern boundary has been covered with two to three feet of rubble fill, which now supports a meadow of goldenrod. The fill was introduced during the dam construction and can be seen on 1965 aerial photographs (Figure 4). To the north and along the Corps-owned banks of Lohn Creek, the current vegetation consists of a willow thicket, reflecting an artificially high water table created at the mouth of the creek by the reservoir. This section of Area A has been subject to less severe land alterations, including creek bank erosion, and a road that is visible on the south side of the creek in Figure 4. Figure 4 also shows the location of a pipeline along the northern boundary of Area A, within the Corps of Engineers owned portion.

Previous Investigations

During the 1962 survey of the proposed Eau Galle Reservoir, one archaeological site was discovered in the vicinity of Area A. This site (Sc 11, Larson 3) was reported to be "located at the foot of a hill about 100 feet east of Lohn Creek" (Buck and Thyngensen n.d.:1-2). Four 2x2 foot square holes were excavated at this location, which was also reported as a place where Mr. Kenneth Larson had found projectile points. The four 1962 test holes produced the following materials: (#1) 1 point fragment, 124 flakes; (#2) 20 flakes; (#3) 5 flakes; (#4) 3 flakes. These materials were reported to have come from the plow zone, and their distribution suggested that the site limits were 100 feet by 75 feet, along the edge

of the hill.

In 1964 Hank Kerr revisited Sc 11, and conducted test excavations (1965:50-52). Kerr described the site as "on a high rise of ground east of Lohn Creek." The 1964 testing involved two five-foot squares. These squares produced a minimal amount of material, none of which was diagnostic or found below the plow zone. As a result, Kerr interpreted the site as a shallow campsite or workshop.

Kerr's investigations in 1964 also located a second site in Area A. This site (Sc 23, Larson 4) was reported as being 150 yards downstream of Sc 11, where numerous chert flakes were found eroding from the creek bank. Kerr conducted extensive test excavations at Sc 23. Two grids were set up for units, one on each side of the creek.

Grid A was placed on the north side of the creek, where large flakes were recovered from the surface. Grid B was set up 40 yards upstream, at a location where flakes were observed eroding from the creek bank at a depth of 2 feet. One 5 x 5 foot square was excavated at Grid A. This unit was excavated through six levels. (Although the thickness of these levels is not indicated in Kerr's report, standard levels during the State Historical Society testing at the reservoir were .4 foot). Nondiagnostic lithic materials were recovered from all six levels. Several scrapers and cores were also recovered from the surface at Grid A.

Four 5 x 5 foot squares were excavated at Grid B of Sc 23 in 1964. A fifth unit was placed 110 yards to the southeast of Grid B, "where the ground has begun an upward slope to the surrounding hills." The four units at Grid B along the south bank of Lohn Creek recovered prehistoric materials through five arbitrary levels, encountering four soil horizons. The first two levels also yielded historic materials. In Level 3 a "fishtailed based" point was recovered that was compared to an "expanding stemmed" point from the Lamb-5 Site (47 Sc 25). Expanding-stemmed points from Sc 25 were later interpreted as similar to Late Archaic/Early Woodland Durst Stemmed Points (Brandon 1968:10-11). In addition, a possible fire hearth was located in Levels 3 and 4 of two adjacent test units at Grid B. Kerr also mentions deer-bone from these excavations.

The isolated test unit to the southeast of Grid B was excavated for three levels, but no artifacts were recovered. The locational description

of this test pit would place it on the southwestern of two truncated alluvial fans that form the southeast edge of Survey Area A, in what is still Mr. Kenneth Larson's property.

Kerr's testing of Sc 23 produced what he considered a low quantity of artifactual material and, consequently, plans for more extensive excavations were abandoned. However, in his concluding statement on the results of the 1964 work, additional work is recommended.

Results

The present condition of Area A necessitated shovel testing as the primary survey technique; however, examination of the eroding creek bank allowed a much greater sampling of subsurface conditions. Obvious land disturbances such as old channel scars were not systematically surveyed, because of the high probability that no intact cultural remains would be located. However, all potentially stable areas were investigated, initially with arbitrarily selected shovel holes. When undisturbed soil strata were encountered, transects were continued. However, if disturbed soils were revealed, the area was not surveyed further. Much of the valley bottom in the high water easement was found to be disturbed and, consequently, was not systematically shovel tested.

A total of ten shovel test transects were excavated within Area A. Transects 1-3 were placed along Lohn Creek, within Corps-owned property. Transects 4-6 were located to the southeast of the actual survey area, in an attempt to relocate Sc 11. Transects 8-10 were placed in the bottom of Lohn Creek valley, within the high water easement. Survey was not possible in the rubble-capped portion of the Corps-owned land along the southern margin of the survey area. Figure 6 shows the transects and the rubble-filled area. A description of the individual transects and their results follows. Appendix A lists in tabular form the depth, soil type, and materials encountered for each shovel hole in Area A.

Transect 1. This transect was placed parallel to the north bank of Lohn Creek, within the Corps-owned section of the survey area. A total of five shovel holes were excavated at 15-meter intervals, from west to east. The location of Transect 1 corresponds to the reported location of Sc 23 Grid A (Kerr 1965). This area is now covered with dense vegeta-

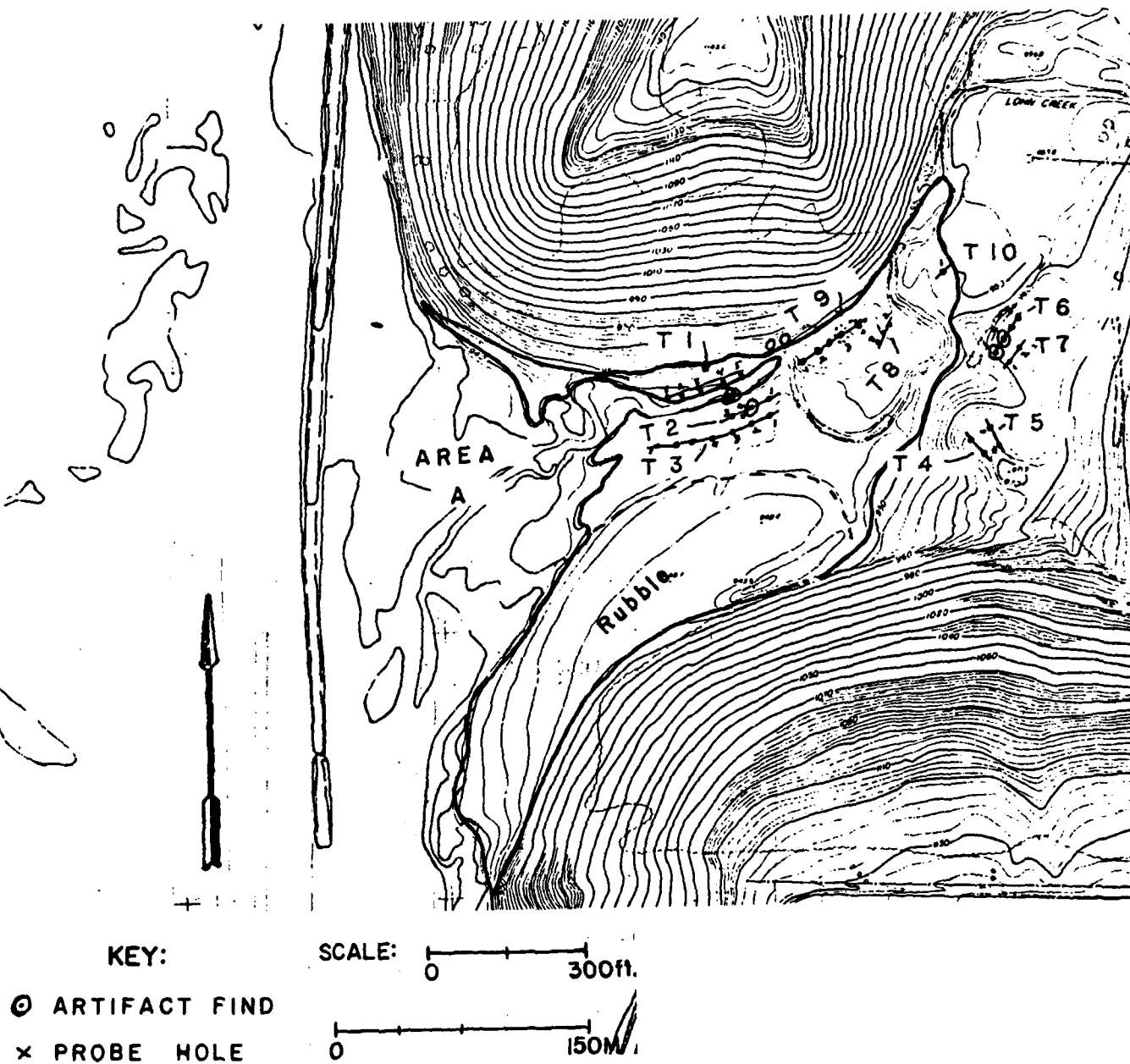


Figure 6. Survey Area A (2 foot contour map)

tion consisting of thorny shrubs and briar. Soils were very dark silts indicating a wetland environment. No cultural materials were encountered in any of the shovel holes in Transect 1; however, 3 chert flakes were collected from the surface on the north side of Lohn Creek. These finds were exposed in cattle paths on the sloping base of the north boundary hill, to the east of the Corps-owned property line. The flakes are probably associated with Sc 23 Grid A, although they were found about 50 meters west of and considerably higher than the reported location of Kerr's test square.

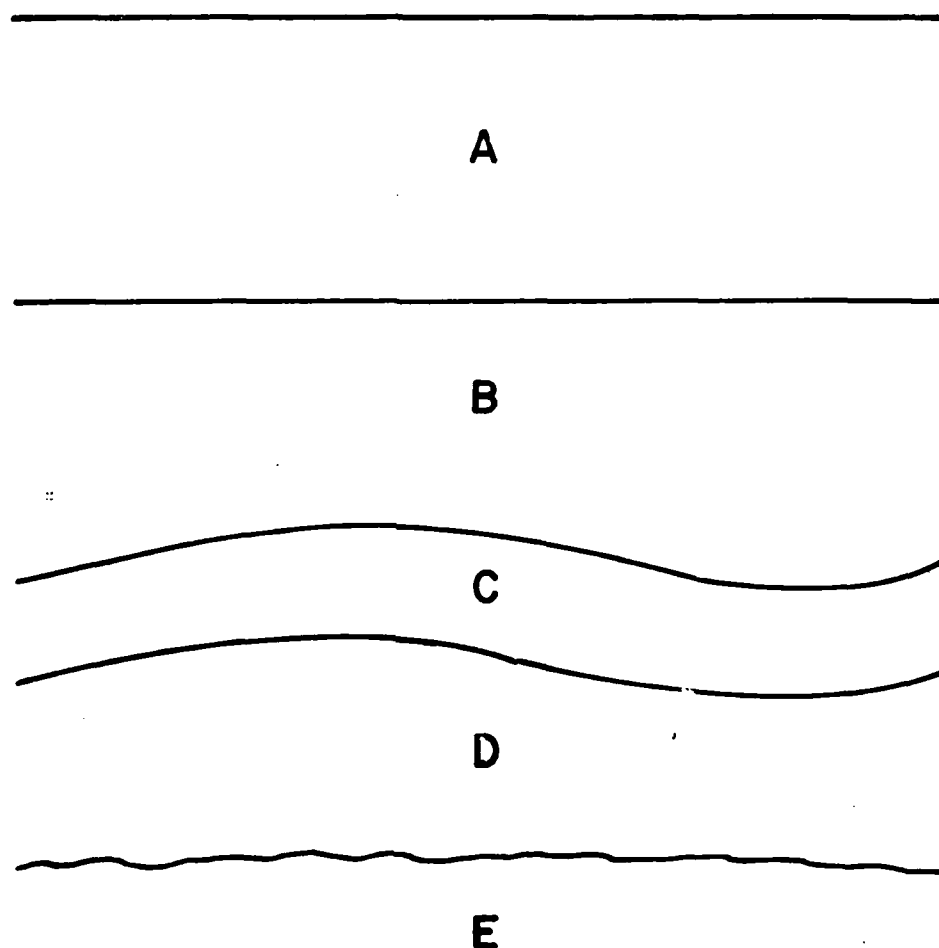
Transects 2 and 3. Transects 2 and 3 were placed parallel to the south bank of Lohn Creek with the Corps of Engineers owned section of Area A. This corresponds to the area of dense willow thicket created by the raised water table from the reservoir. It is also the reported location of Sc 23 Grid B. A narrow rise exists along the creek towards the east end of the willow thicket. The rise drops to the south at the approximate location of a road cut indicated on Figure 6. Transect 2 was placed near the creek on the main portion of the slight rise. A total of 5 shovel holes were excavated in this transect. Holes 1, 2, and 3 were placed 15 meters apart, from east to west; hole 2A was placed 7 meters south of hole 2; and hole 2B was placed 2 meters to the north of hole 2. Shovel hole #2 of Transect 2 produced 1 chert flake and 2 pieces of chert shatter. Inspection of the eroding bank between shovel holes #2 and 3 revealed a buried A soil horizon 65-75 cm below the present surface. The buried A horizon was scraped with a trowel, which revealed one chert flake and charcoal flecks in situ. The exposed profile was only about 1 meter long. Figures 7 and 8 illustrate the cultural horizon in the exposed bank cut. Additional holes nearby (#2A and 2B) did not produce artifactual materials, but hole #2B contained charcoal in a silty horizon between 56 and 74 cm below the surface. The soil profiles observed in the shovel holes in Transects 2 and 3 varied considerably; however, alternating sand and silt lenses were typical. These suggest flooding episodes. In several Transect 3 shovel holes, disturbed soil from the 1965 construction road was encountered.

The 1964 report for Sc 23 indicated that flakes were observed in the south bank of Lohn Creek at a depth of 2 feet (about 60 cm). The in situ



Figure 7. Photograph of south side bank exposure at Lohn Creek in Survey Area A. (Note buried A Horizon, which contained artifacts).

FIGURE 8
47-Sc-23
NORTH FACING EXPOSURE OF LOHN CREEK



KEY: A - PLOW ZONE
B - ALTERNATING SAND AND SILT LENSES
C - BURIED "A" HORIZON (CULTURAL LAYER)
D - ALTERNATING SAND AND CLAY DEPOSITS
E - THICK GRAVEL DEPOSIT

SCALE: 1" = 20cm. 

Figure 8. Profile of cleaned section of south side bank at Lohn Creek in Survey Area A.

cultural horizon located during the 1982 survey is slightly deeper than the one identified in 1964. Kerr's soil description from his excavations at Grid B does not clearly indicate the alternating sand and silt lenses observed in the 1982 shovel test holes in Transects 2 and 3. Kerr reported a stratigraphic sequence of 0.4 foot (12 cm) of tan sandy loam over a 0.5 foot (15 cm) layer of yellow-brown sandy loam, overlaying a gray-brown sandy loam that was 0.9-1.8 feet (27-50 cm) deep. The deepest deposits were a dark brown clay loam containing gravel (Kerr 1965:47). Despite the apparent differences between the descriptions, the location of the cultural materials on the south side of Lohn Creek near Transects 2 correspond to the reported location of Sc 23 Grid B well enough to consider the site positively relocated.

Transects 4 and 5. Transects 4 and 5 were placed on the southwestern most of the two high truncated alluvial fans. These transects were not on Corps-owned property, as the elevation of the fan (960-970 feet) is well above the maximum high water easement contour (949 feet). Permission to excavate shovel holes within the entire pasture in the Lohn Creek bottoms was obtained from Mr. Kenneth Larson. The location of Transects 4 and 5 correspond with the fifth of Kerr's excavation Units at Sc 23, Grid B. Kerr's excavations did not recover cultural materials in that test unit. The 1982 shovel testing on this fan (Transects 4 and 5) also encountered no cultural materials. The shovel holes in Transects 4 and 5 were placed 15 meters apart.

Transects 6 and 7. Transects 6 and 7 were placed to the northeast of Transects 4 and 5, on the second alluvial fan forming the southeastern boundary of survey Area A. These transects were also above the high water easement, and are not on Corps of Engineers managed property. Transect 6 was placed parallel to, and within a few meters of, the truncated, wooded edge of the fan, which runs in a SE-NW direction. Holes #1, 2, and 3 of Transect 6 were placed 15 meters apart. Prehistoric materials were recovered from holes #1 and #2, but not from hole #3. Hole 2A was excavated halfway between holes #2 and #3 in an effort to establish the boundary of the site. No materials were recovered from hole 2A. The two holes in Transect 7 were placed 15 meters apart, and 15 meters southeast of holes

#1 and 2 of Transect 6. The Transect 7 holes produced no artifactual materials.

The materials found on this fan correspond to the reported location of Sc 11. As noted earlier, Sc 11 had been tested in 1964. with the results indicating that all the cultural materials were contained within the plow zone. The site at present is experiencing no adverse conditions.

Transects 8 and 9. Transects 8 and 9 were placed within the high-water easement in survey Area A. Both transects were located within a large meander loop of Lohn Creek. Much of the southeastern portion of the meander loop is scarred from channel reworking and, as is typical of the inside bend of stream meander loops, the surface soils appear to be of recent origin. Transects 8 and 9 were placed near the northwest end of the meander loop in a SW-NE direction, on land that appeared more stable and suggested the possibility of in situ cultural deposits.

Only three shovel tests were excavated in Transect 8, and were spaced only about 2 meters apart. The holes were excavated in this manner in order to identify the nature of a narrow linear rise within the meander loop. These shovel holes indicated that the rise represents an old surface remnant, or a levee-like bar. No cultural materials were recovered from the shovel holes in Transect 8. Holes #1, #2, and #3 of Transect 9 were excavated at 15-meter intervals. No artifactual materials were recovered in these holes; however, a distinct burned charcoal layer was encountered in shovel hole #3 of Transect 9, between 18 and 21 cm below the surface. Holes #5 and #6 were placed within 5 meters of hole #3, on the same transect line, but no additional suggestions of non-natural features were revealed.

Transect 10. To the northeast of the meander loop, and within the high water easement, the pasture surface contains many signs of channel reworking and, therefore, the possibility of in situ cultural remains is low. A single shovel test (Transect 10) was placed in this area. The soils encountered in the Transect 10 hole confirmed the impression of unstable land, and consequently no further work was attempted there.

Survey Area B

Description

Survey Area B encompasses a portion of the valley bottom of Lousy Creek. The area is bounded on the north by a Corps of Engineers property fenceline (corresponding to the southern edge of the NE $\frac{1}{4}$, NE $\frac{1}{4}$, Sec. 31); on the east by old C.T.H. "NN"; to the west by the base of a steep hill (on top of which lies the recreation area campground); and on the south by the northeast shore of the reservoir. The valley bottom averages 180 meters wide, and the portion within the Corps-owned land is 645 meters long. Thus, Survey Area B comprises 28.7 acres.

Within the survey area, Lousy Creek is bent and crooked from stream meandering. Former channel scars are readily apparent in the valley bottoms. To the north of the present confluence of Lousy Creek and the reservoir, the stream channel has cut approximately 3 meters below the valley floor. Erosion is severe along many of the outer banks of the meander bends in this section of the creek. However, at the south end of Area B, the height of the banks decreases because of inundation by the reservoir.

Much of the valley bottom in Area B is relatively flat, dipping 10 feet from the northern boundary to the reservoir shore. Two noticeable rises occur at the valley edges. One of these is located at the southwestern end of the area and the second is at the mouth of a large ravine east of the creek. The rise at the southwest end represents old slope wash from the adjacent steep hillside, which forms the western boundary of the survey area. This rise dips gradually to the east and the present creek mouth. The northern edge of this rise drops abruptly for nearly 2 meters, a consequence of past channel cutting. The eastern rise consists of natural rock rubble and soil that has washed out of the ravine to the east of old C.T.H. "NN" and into the valley. A small bridge in the road still allows the ravine wash to empty into the bottoms. The rise extends to the north and south of the bridge in a delta-like fan conforming to the width of the ravine mouth. The west edge of this rise drops suddenly about 4 meters, indicating that the fan has been truncated by earlier stream cutting.

The vegetation of Survey Area B is in a state of transition from

primary to secondary recovery. Much of the bottom surface supports a fallow field of goldenrod, milkweed, and bramble, with marsh grasses occupying the channel scars. Occasional sapling trees also occur within the former agricultural fields. Box elder trees dominate the present vegetation along the creek and follow more recently abandoned channels. The rise on the east side of the valley at the mouth of the ravine is covered with stands of box elder, sumac, and bramble. At the south end, where Lousy Creek empties into the Eau Galle Reservoir, the vegetation reflects the artificially raised water table. This confluence now has the appearance of an estuary-like setting, with marsh grasses and willows dominating the flora.

Previous Investigations

Three archaeological sites (Sc 20, Sc 21, and Sc 22) were reported during the initial 1962 survey of the Eau Galle Reservoir, in what is now Survey Area B (Buck and Thyngensen n.d.:4). These sites were all located near the present mouth of Lousy Creek on what was formerly the Arthur Anderson Farm, in the NE $\frac{1}{4}$, SE $\frac{1}{4}$, Sec. 31, T28N, R15W. Sc 20 (Anderson 1) was reported as a single projectile point located "in a cornfield 90 feet north of a 90 degree bend in Lousy Creek." Sc 21 (Anderson 2) was reported as 17 flint flakes from a single test pit in a pasture about 100 feet west of the 90 degree creek bend, and approximately 200 feet southwest of Sc 20. The description adds that Mr. Anderson reported finding projectile points in the pasture in which the site was located; however, four surrounding pits placed 30 feet from the first produced no cultural materials. Sc 22 (Anderson 3) was described as 6 flint flakes from a test pit in the same pasture as Sc 21 was located. The Sc 22 shovel hole was located 100 feet west and 120 feet north of a field gate. Test pits placed around the Sc 22 shovel hole were also sterile of cultural materials. The size of the 1962 shovel holes is not given in Buck and Thyngensen's report, nor is it stated whether or not the soils were screened. Dr. Joan Freeman of the Museum of Anthropology at the State Historical Society of Wisconsin states that the shovel holes were not screened (personal communication).

A copy of the original sketch map showing the locations of Sc 20, Sc 21 and Sc 22, was obtained from Dr. Freeman. This map is rather vague,

and indicates locational reference points that are no longer extant or have been obscured.

In 1964, State Historical Society personnel revisited Sc 20 and Sc 21 (Kerr 1965:62-63). In 1964, Sc 20 was not cultivated, and no additional discoveries were made. Although the site was initially reported as a single projectile point in a cultivated field, Kerr recommended extensive testing. Apparently, the recommended testing never was undertaken.

The 1964 resurvey of Sc 21 produced additional materials, including 1 incomplete corner-notched point, 1 broken and 1 complete core/knife, 28 flakes, and historic porcelain fragments. The collecting conditions and methods are not described. Kerr also recommended additional testing at Sc 21.

Results

Section 4.01 of the Scope of Work for the 1982 survey at Eau Galle Recreation Area stipulates that an attempt be made to relocate and assess the present condition of Sc 20, Sc 21, and Sc 22. Unfortunately, several of the land marks used to describe the locations of these sites in the 1960's have been obscured by the inundation of the reservoir. For example, the country road forming the south end of the pasture, and the gate into the field in which Sc 21 and Sc 22 were located, are now permanently inundated. In addition, the 90-degree bend in Lousy Creek, which was used to report the location of Sc 20 and Sc 21, is now within the marshy area at the present creek mouth, and its original configuration is unclear. Potentially useful landscape references, such as the base of the hill forming the western boundary of the survey area, were not mentioned in the 1960's records.

Fortunately, aerial photographs from 1965 clearly indicate the 90-degree bend in Lousy Creek, and its spatial relationship to the country road (Figures 2 and 3). Comparison between the 1965 aerial photographs and the 1973 post-inundation aerial photographs, enabled relocation of the 90-degree creek bend near the present marshy creek mouth. This allowed an accurate estimation of the reported locations of Sc 20, Sc 21, and Sc 22 in the present landscape setting.

Shovel testing was the primary survey technique utilized in Area B;

however, visual examination of exposed banks along Lousy Creek and the north shore of the reservoir was also employed. The interval between shovel holes varied depending on landscape features, and the estimated location of previously reported sites. For example, in the low area in the middle of the survey area to the west of the creek, where former channel scars are frequent, and soils indicate a former marshy environment, the shovel test interval was 30 meters. However, on the higher area near the southwest end of the survey area, at the estimated location of Sc 21, the interval was decreased to 5 meters between shovel holes after initial holes at 15-meter intervals did not encounter cultural materials.

For two reasons the majority of the 1982 shovel testing in Survey Area B was located at the southwest end of the area. First, according to the 1962 and 1964 survey records, this was the area where Sc 20, Sc 21, and Sc 22 were located. Secondly, a large portion of the flat creek bottom to the north and east is low, reworked by channel scouring, and therefore, is unlikely to contain in situ cultural materials. Of a total of 21 shovel test transects within this survey area, Transects 1-15 were placed on the raised area at the southwest end. Transects 16-19 were excavated on the flat valley bottom to the north of Transects 1-15, and on the west side of the creek. Transects 20 and 21 were placed on the east side of the creek. Transect 20 was located in the flat valley bottom to the north of the raised bench in the middle of the survey area, and Transect 21 consisted of shovel holes excavated on the bench. Shovel testing was not undertaken in the bottomland area at the mouth of Lousy Creek or below the bench to the east of the creek. These areas were exceptionally low and wet, and the probability of in situ cultural remains in these sections of the survey area was considered remote. Figure locates the transects, shovel holes, and areas not surveyed in Area B in 1982.

Transects 1-15. Transects 1-15 were placed on the raised area at the south west end of Survey Area A. The transects were oriented in a west-east direction. Transects 1-10 were begun at the base of the hillside which forms the western side of Lousy Creek Valley. Shovel holes in

Transects 1-10 were, with few exceptions, excavated at 15-meter intervals. Shovel holes in Transects 11-15 were excavated at 5-7.5 meter intervals. The placement of Transects 11-15 was based on the approximate location of Sc 21 as inferred from the site records. Transects 11, 12, and 13 were placed parallel to and between Transects 6 and 7, and Transects 14 and 15 were placed between Transects 8 and 9 (see Figure 9).

The soils encountered in nearly all of the shovel holes of Transects 1-15 of Area B were very similar, and the common stratigraphic sequence was designated Soil Profile Type 1. Soil Profile Type 1 for this survey area consisted of three stratigraphic zones. These zones varied in depth and thickness; however, the texture and color of each were consistent between shovel holes. The A-Zone was silty, and usually a color of 10YR3/2. This zone may represent a former plow zone. The B-Zone was a distinct lighter color (10YR5/3), and a silty clay. The C-Zone was a silty clay or a more orange-brown color (10YR4/4-10YR5/4). In a few shovel holes along the west edge of the survey area, at the base of the hillside, soils consisting of mixed sand and gravel were encountered, which are interpreted as representing an old farm road.

Prehistoric materials were recovered from several shovel test holes on the raised area where Transects 1-15 were placed. Undiagnostic lithic materials were found in Transect 1, Shovel Hole #1; Transect 2, Shovel Holes #2 and #6; Transect 3, Shovel Holes #1, #2, #3, #5, #7, #9, and #10; Transect 6, Shovel Hole #6; and Transect 12, Shovel Hole #2. In addition, several other shovel holes encountered suggestive evidence of cultural activity, such as burned rock and charcoal (See Appendix A listing of shovel hole findings for Area B). Furthermore, inspection of the northern shore of the Eau Galle Reservoir at the south end of Survey Area A resulted in the recovery of numerous prehistoric artifacts from the water edge. These materials were found in redeposited contexts, having been eroded from the shore bank. The eroding bank varies from several feet high near the base of the hill side at the west side of the survey area, to non-eroding marsh shore at the confluence of Lousy Creek and the reservoir. The extent of the materials along the shoreline is 60 meters between the base of the hillside, and a small inlet on the north shore of the reservoir to the east of the creek mouth. Between the inlet and the



Figure 9. Survey Area B (2 foot contour map)

mouth of Lousy Creek is a small peninsula on which prehistoric cultural materials were recovered in shovel testing (Transect 3, Shovel Holes #9 and #10). Thus, the site extends from the base of the hillside to the west side of the present creek mouth in a west-east direction, a distance of 120 meters.

The distribution of materials to the north of the reservoir shore, as indicated from the shovel test sampling, suggests a possible overlap between the reported locations of Sc 21 and Sc 22. Cultural materials were recovered from shovel holes along Lousy Creek in Transects 3 (Shovel Holes #9 and #10), thus indicating that the northern extent of Sc 22 along the creek is at least 25 meters from the reservoir shore. Materials were also recovered 45 meters to the north of Transect 3, Shovel Hole #8; in Transect 6, Shovel Hole #6; and 30 meters to the northwest of the latter in Shovel Hole #2 of Transect 12. The northernmost find (Transect 12, Shovel Hole #2) corresponds with the reported location of Sc 21.

Given the inherent sampling problems of shovel testing, it is difficult to accurately judge the actual distribution of cultural materials on the raised area at the southwest end of Survey Area B. From the 1982 findings, both Sc 21 and Sc 22 can be considered positively relocated. However, it is unclear whether or not the Sc 21 finds should be considered as a separate site location from Sc 22, and with which of these sites the findings at Transect 6, Shovel Hole 6 should be associated. Given the fact that Sc 21 and Sc 22 are situated on the same topographic feature, that the greatest distance between the two locations (based only on non-productive shovel test holes at a 15-meter interval) is only 30-45 meters, and that Sc 21 has produced so few materials, it seems reasonable to consider these as one archaeological site, with the Sc 21 location representing the northern edge of material scatter. The most dense area of cultural materials is along the southern edge of the raised area at the location of Sc 22. More extensive testing would be necessary to determine whether or not an actual gap exists between the distributions of cultural materials at the locations of Sc 21 and Sc 22.

Transects 16-18. Along the north edge of the rise at the southwest end of the survey area, and west of Lousy Creek, the surface drops sud-

denly to a low, wet area that has been scarred by channel reworking. This flat bottom continues to the north end of the survey area, although the surface elevation rises gradually. Initial shovel holes in the bottom revealed very dark moist soils, suggesting a former wetland. This area was considered to have low potential for in situ cultural materials and, consequently, a single transect (16) was placed through the center of the bottomland, paralleling the base of the western hillside. The shovel holes in Transect 16 were spaced 30 meters apart, until Shovel hole #10 was excavated near the north end of the survey area. At Shovel Hole #10 of Transect 16, prehistoric cultural materials were encountered, and the transect interval was reduced to 15 meters. Shovel Hole 9.5 was placed 15 meters to the south of Shovel Hole #10 to determine the southern extent of the cultural materials. The 15-meter interval of Transect 16 was maintained to the northern boundary of the survey area. Transect 17 was begun 15 meters to the southwest of Shovel Hole #9 of Transect 16, and aligned parallel to Transect 16. A 15-meter interval was maintained between all of the Transect 17 shovel holes. Transect 18 consisted of only one shovel hole excavated 15 meters east of Transect 16 Shovel Hole #10 in an attempt to identify the eastern limit of the cultural materials. No additional shovel holes were excavated in Transect 18, because much of the land east of Transect 16 is scarred and reworked.

The soils encountered in Transect 16 varied from consistent black (10YR2/1) silts in Shovel Holes #1, 1A, 1B, 2, and 3 to lighter (10YR3/2-10YR3/3) silt loams beginning with Shovel Hole #4. Beginning with Shovel Hole #6, soil stratification was evident, with a light B-zone (10YR3/3) that varied in depth and thickness. The C-zone was more clayey (10YR3/2). (See Appendix A shovel hole soil profiles.)

Prehistoric cultural materials were encountered in several shovel holes near the north end of the Survey Area B, to the west of the creek (Transect 16, Shovel Holes #10 and 11; and Transect 17, Shovel Holes #1, 2, 3, and 4). These indicate a distribution of at least 45m N-S x 15m E-W. These finds do not correspond to any previously reported site. The 1962 and 1964 investigation records do not indicate that this area (formerly the Otis Anderson property) was ever surveyed. This newly located site is currently experiencing no disturbance. A distinct plow zone

was not recognized in the shovel holes; however, the land had been cleared at one time of its natural cover, and Mr. Kenneth Larson stated that the entire Lousy Creek bottomland had been cultivated during pre-reservoir times.

Transect 19. Along the base of the hillside forming the western wall of Lousy Creek Valley, and approximately due west of Transect 16 Shovel Hole #1, is a small alluvial fan at the mouth of a ravine. Because of the noticeable relief of the fan, overlooking the low flat bottomlands, the rise was shovel tested (Transect 19). Transect 19 consisted of 5 shovel holes. Shovel Holes #1, 2, and 3 were placed 15 meters apart in a south-north direction. Shovel Hole #4 was excavated 5 meters to the east of Shovel Hole #2. Shovel Hole #5 was excavated 10 meters east of Shovel Hole #2, near the base of the fan.

No cultural materials were encountered in Transect 19. Soils in Shovel Holes #1, 2, 3, and 5 were consistent as a medium brown silt mixed with sand in the A-Zone. The A-Zone averaged 35 cm deep, and overlay an orange-brown silt. Shovel Hole #4 encountered mixed sand and gravel, which appears to represent the same farm lane encountered in shovel holes along the base of the hillside on the rise at the southwest end of the survey area.

Transect 20. To the east of Lousy Creek, at the north end of the survey area, the surface resembles that of the west side of the creek where the previously unreported site was discovered (Transects 16 and 17). A single transect (20) was placed parallel to C.T.H. "NN" in this portion of the survey area, beginning at the north boundary fence line, and continuing to the base of the truncated alluvial bench in the middle of Survey Area B. to the east of the creek. A total of eight shovel holes were excavated at 15-meter intervals in Transect 20.

The soils encountered in the Transect 20 shovel holes varied as mottled and banded silts (10YR3/2-10YR5/4). In addition, a section of eroding creek bank located 15 meters to the west of Transect 20, Shovel Hole #2 was cleaned with a trowel, and the profile examined to reveal the nature of the deposits. The profile showed an organic sand (10YR3/2) between 0-39 cm, over mottled silt and sand (10YR3/3) to a depth of 45 cm,

which in turn overlay a silt clay lens (10YR4/3), from 45 cm to the base of the cut (approximately 1 meter below the surface). The mottled and banded, mixed sand and silt suggests flood deposition in the upper horizons. These soils were quite different from those encountered across the creek at the newly discovered site. No cultural materials were recovered in Transect 20.

Transect 21. The last shovel hole (#8) of Transect 20 was excavated at the base of the north end of the truncated alluvial fan along the east edge of Survey Area B. The bench top formed by the alluvial fan is relatively flat and narrow, paralleling County Trunk "NN". A small intermittent drainage bisects the bench, allowing runoff to drain from the hillside ravine east of C.T.H. "NN", beneath a small bridge under the road, and into the floodplain of Lousy Creek. Within Survey Area B, this channel is filled with large redeposited bedrock boulders, some of which appear to have been placed here during construction of the bridge. To the north of the channel outlet, the bench top is marked by a series of barbed-wire fences that follow the outer edge of the bench, enclosing a rectangular area. This area is partially open; however, to the north it is increasingly covered with sumac. The fence reflects pre-reservoir agricultural practices.

Three shovel holes were excavated along the western fence line, within 5 meters of the edge of the bench. These were designated Transect 21 of Area B. Shovel Hole #1 was placed near the southwest corner of the fenced-in area, near the bisecting channel. Shovel Hole #2 was placed 45 meters to the north, and Shovel Hole #3, about 15 meters to the north of Shovel Hole #2, outside of the northwest corner of the fenced area (Figure 9). Each of the Transect 21 shovel holes contained redeposited dolomitic bedrock intermixed with loose loamy soil. Shovel Hole #1, nearest the ravine outlet channel, contained more rock than soil and, in fact, redeposited rock is partially exposed at the surface in the vicinity of this shovel hole. Shovel Holes #2 and #3 contained less rock and more soil.

No cultural material was recovered in any of the Transect 21 shovel holes; however, additional indications of historic activities were identifiable on the surface. Immediately to the north of the

location of Shovel Hole #2, a small rectangular outline was observed on the surface of the bench. The rectangle is about 1 meter east-west by 2 meters north-south, and appears to represent the location of a structure. No additional structural features are evident on the surface to suggest the function of the structure; however, two "pre-pop top" rusted beer cans were observed on the surface 1.5 meters to the east of the structure.

To the south of the drainage channel which bisects the bench, additional evidence of historic activity was observed. A stone and concrete foundation was located approximately 30 meters to the south of the bridge. This foundation measures approximately 12 meters north-south by 5 meters east-west. The building was constructed by cutting into the west edge of the alluvial fan so that the east wall is now obscured from post-occupational slumping. The north wall is made of large uncut blocks of local bedrock and mortar, and stands approximately 1.5 meters high. The south wall is similar to the north; however it is not as well preserved, and has a door space at the middle. The west wall is marked by a collapsed line of concrete block. The concrete blocks have a distinctive "H"-shape in cross section. The floor of the building consists of three strips of poured concrete running parallel to the east and west walls. The middle concrete pad leads from the southern doorway and appears to represent a pathway. Two narrow troughs separate the center pad from the east and west pads. (Figure 10).

Along the east and west walls in the northern half of the structure are concave concrete troughs with "U"-shaped cuts facing the interior. These appear to be livestock feeder areas. Along the east wall in the south half of the structure are six vertical pipes that have "U"-shaped bars connecting them near their bases. These appear to represent barn stall stanchions, and this portion of the structure may have been a milking area. One of the few artifacts visible within the structure appears to be a section of a wood and metal wagon or farm machinery hitch. It is partially covered by the collapsed and slumped east wall and is north of the pipe stanchions. Just outside of the doorway at the south end of the structure is a concrete pad oriented obliquely to the foundation. Near the east corner of this concrete pad a door hinge and shovel blade were

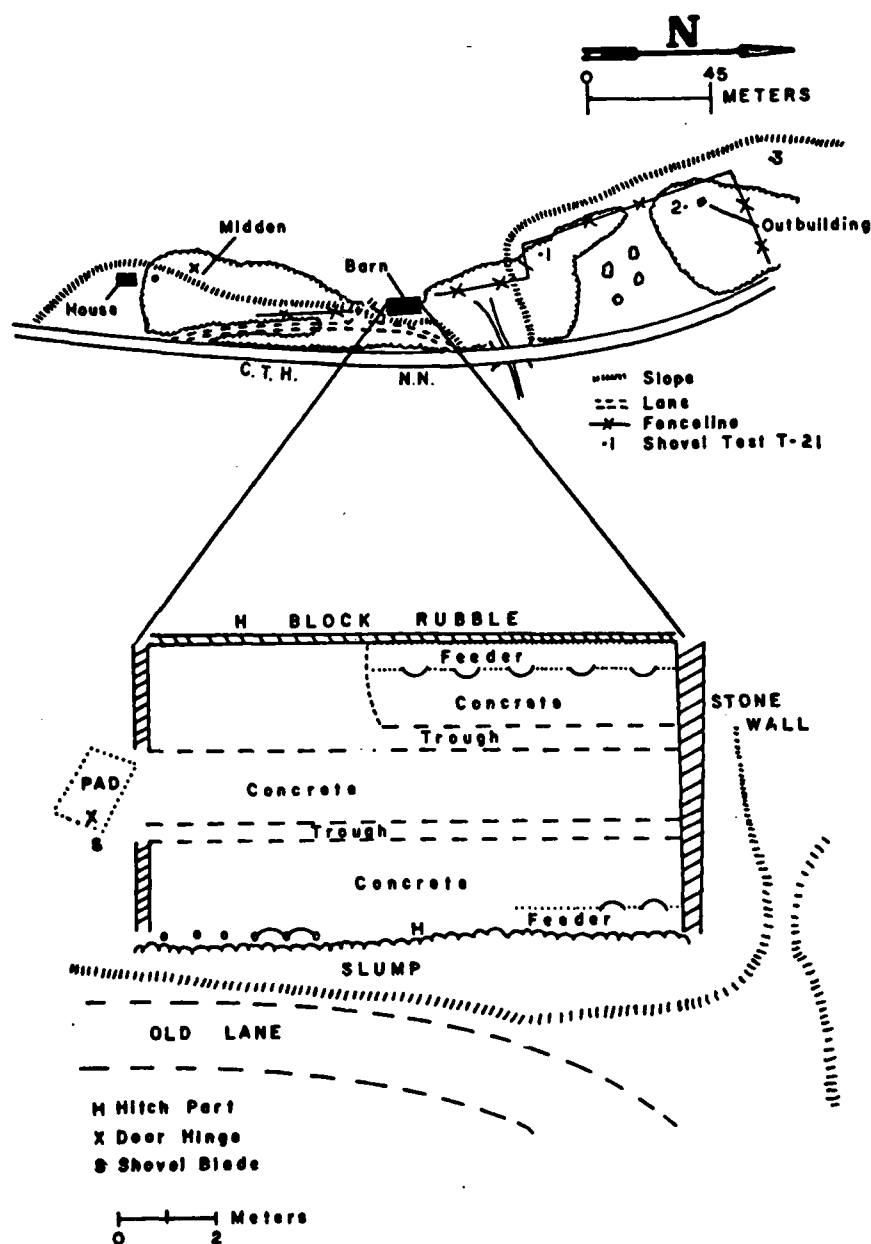


Figure 10. Otis Anderson Farmstead and Barn
(based on field pace mapping).

observed.

This structure has the appearance of a livestock barn from a pre-reservoir farm. There are indications that the barn was two stories high. This is inferred from a series of collapsed and partially charred support beams on the floor within the structure, and by an old lane or access road located on the bench top just above the east wall. This lane appears to have permitted access to the top floor of the barn.

The lane follows to the east and south as a loop that joins to County Trunk Highway "NN". A barbed-wire fence line follows the wooded crest of the bench from the barn foundation to the south. However, an opening in the fence for another farm lane from the top of the bench to the floodplain and barn is evident, approximately 5 meters to the south of the barn. Historic artifacts were scattered along the slope of the bench to the south of the barn. These included the top of a metal milk storage container and a 1941 Wisconsin license plate (#737-951). At the point where the south end of the access road bends to the east to meet County Trunk Highway "NN", there is a midden of cans, glass, and ceramics at the base of the bench. Several of these artifacts were food containers and some of the labels were identifiable. Table 1 lists the identifiable foods and other markers recognized in this midden.

Table 1

Historic midden items:

Hills Brothers Coffee (2 lb. can) "1939 copyright"
 Super Valu Coffee (2 lb. can)
 Maxwell House (regrind) Coffee (2 lb. can) "vacuum-packed"
 Folgers Coffee (2 lb. can)
 Homebrand Coffee (2 lb. can) "Mc Garvee-Atwood Coffee Co., Minn."
 Real Gold Concentrated Grape Drink container
 1 orange juice bottle lid
 1 cream bottle "registered sealed ½ pint, 8-46"
 several brown 12 oz. beer bottles
 several canned meat tins
 1 jar top for smoked lunch herring
 "57" catsup bottle
 1 glass bottle fragment "Stulays"
 1 plate (flower design) "Debutante by Homer Laughlan USA m60 N8"
 1 plastic chess piece (Knight)
 several saw-cut bones

The midden scatter continues to the south at the base of the hill for about 15 meters, where several screw-top medicine bottles (contents still enclosed) were located. With these were a pick-axe head, a door lock and other materials. Signs of additional historic structural features were observed above the latter midden area. The features include a circular hole approximately 1.5 meters in diameter and 1 meter deep. A round beam lies across the top of the hole in a north-south direction. The function of the hole is not known; however, it may represent the remains of an out-house.

Approximately 3 meters to the south of the circular hole, on top of the bench, are the remains of another structure. This structure is rectangular (approximately 7 meters north-south by 3.5 meters east-west) and is marked by stone rubble. There is a pile of brick at the north end. The brick is unmarked. This structure appears to represent a house. The bench top at this structure is fairly open, with most of the vegetation consisting of briars.

The location of the historic remains on the alluvial bench correspond to the location of the Otis Anderson farmstead. This farm is noted on the pre-reservoir plat maps and the enlarged U.S.G.S. topographic maps used by the 1962 and 1964 surveyors (Figure 2). In the "Notes on property owners and condition of property in the Eau Galle, July 1962," Mr. Anderson is described as elderly. Mr. Kenneth Larson stated during the 1982 survey that Mr. Anderson is now deceased. It was not determined when the farmstead originated. It appears that the structural features of the farmstead were badly disturbed following the acquisition of the property by the Corps of Engineers during the initial reservoir project period. However, the remains identified during this study suggest that archaeological and historical investigations could provide information about the former Euro-American farming activities in the Recreation Area. The Anderson farmstead site is now protected by Corps ownership; however, natural weathering will undoubtedly deteriorate the exposed artifacts, fence posts, and other features.

Survey Area C

Description

Survey Area C is located at the northwest end of the reservoir. This area consists of a diamond-shaped field bounded on the south and west by a gravel service road (formerly a country road), and to the north and east by the base of a hill, on top of which the recreation area campground is located. This area measures approximately 140 meters north-south by 460 meters east-west (15.9 acres). The field slopes from north to south, with the steepest grade at the base of the northern boundary hill. The pre-dominate vegetation is goldenrod, although sapling trees are scattered throughout the area. The west end rises somewhat, and is covered with sumac and thornbush. On the north edge of the area, the vegetative cover becomes increasingly more wooded, with poplar and white pine.

Previous Investigations

Only one archaeological site (Sc 35, the Longseth-1 Site) was reported from this area during the pre-reservoir surveys. Sc 35 was reported from findings of 1 projectile point or knife midsection, 4 cores, 54 chert flakes, 3 deer teeth, and 3 bone fragments recovered from a cornfield in 1964. The site was across the country road and due east of the Longseth brothers' farmstead, and north of Sc 28 (Kerr 1965:68). Kerr recommended testing of the site; however, this action appears not to have been undertaken.

The scope of work for the 1982 survey required that an attempt be made to relocate Sc 35 and assess its present condition. Unfortunately, the Longseth brothers' house is no longer standing, and using the location of Sc 28 as a reference point would require relocation of that site as well. However, the 1965 aerial photographs show the cornfield as restricted to the south half of Area C. In addition, the 1964 plotting of Sc 35 on the enlarged U.S.G.S. topographic maps (Figure 2) allowed a more precise estimate of the site location. The plotting of Sc 35 on the enlarged U.S.G.S. topographic maps places the site within Survey Area C and to the northwest of the A.C. Strum farmstead. Although the Strum buildings are no longer standing, their location corresponds to the grassy picnic grounds of the Northwest Day Use Area in the present recreation

grounds. Thus the location of Sc 35 should be within the southern half of Area C, and somewhat northeast of the present picnic grounds at the Northwest Day Use Area.

Results

Area C was systematically surveyed in its entirety, with 20 transects oriented in a southeast-northwest direction (parallel to a pathway originating opposite the southward turnoff to the Northwest Day Use Area from the old country road, and continuing up through the field as a trail leading to the Recreation Area Campground). The shovel holes in Transects 1-20 were excavated 15 meters apart (Figure 10).

The soils encountered in the Transects 1-20 shovel holes were very consistent. The basic stratigraphic sequence was designated Area C Soil Type 1. This soil type consisted of a loose loamy A-Zone (10YR4/2), a fine silt B-Zone (10YR5/3) and a silt clay C-Zone (10YR5/4). The depths of the three zones varied. Shovel holes in the steeper northern portion of the survey area were somewhat different, with an A-Zone color of (10YR3/1). The difference in the A-Zone between the south and north halves of the survey area probably reflects the former cultivation of the southern half. The soil along the extreme south edge of the survey area was disturbed from the county road construction, and an east-west pipeline was traceable by disturbed soils approximately 20 meters north of the old county road. The pipeline location is visible on the 1965 aerial photographs during the dam construction (Figure 4).

Naturally weathered chert, a few historic items, and charcoal were encountered throughout the survey area. The historic items may represent minor activities, or unintentional scattering. The specific locations of these finds may be found by comparing the shovel hole finds of historic materials for Area C in Appendix A with the location of the shovel holes plotted on Figure 10. One prehistoric flake was recovered from Transect 1, Shovel Hole #6, and possible broken flakes were recovered from Transect 1, Shovel Holes #1 and #2, and Transect 3, Shovel Hole #2.

A more concentrated effort was made to attempt to relocate Sc 35 based upon the estimated location derived from the literature and map references, noted earlier. The records suggested that Sc 35 should be located near Shovel Holes #1 and #3 of Transects 3, 4, and 5. Consequently,

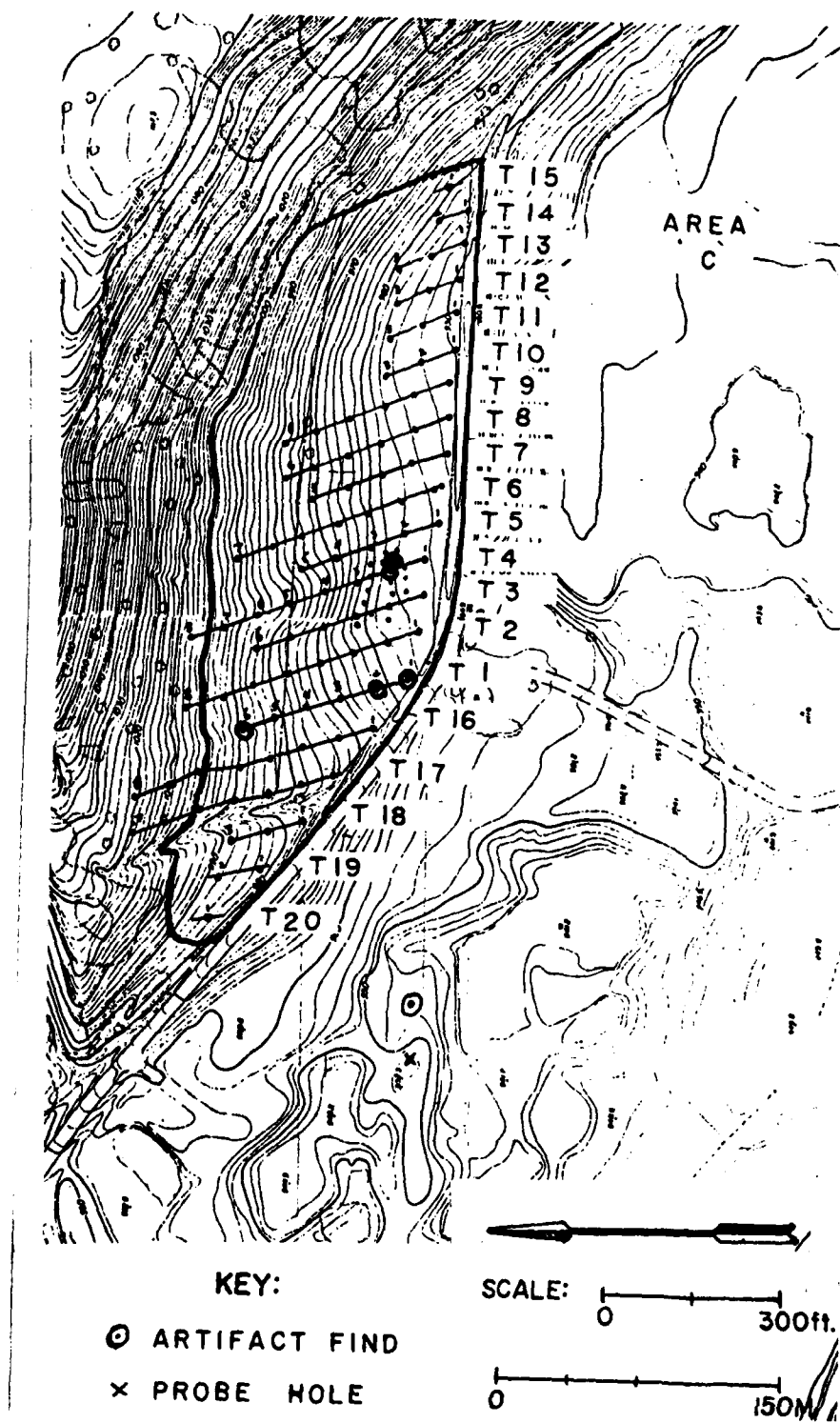


Figure 11. Survey Area C (2 foot contour map)

a series of shovel holes were excavated in this area at 5-meter intervals (see Appendix A for Transects 3, 4, and 5). The only material possibly attributable to Sc 35 that was recovered from these efforts is a possible broken flake from a shovel hole placed 5 meters east of Transect 3, Shovel Hole #2.

As noted earlier, the distribution of materials from 1964, which were the basis for Kerr reporting Sc 35, was not described in the available records. Thus the possible flakes from Transect 1, Shovel Holes #1 and #2; Transect 3, Shovel Hole #2; and the shovel hole 5 meters to the east of Transect 3, Shovel Hole #2 may represent additional materials from this site. The find of an unquestionable flake from Transect 1, Shovel Hole #6 is to the north of the former cornfield, and thus, does not correspond to the reported location of Sc 35. However, given the possibility of the wide scattering of Sc 35 materials, which is to some degree argued for by the distribution of possible flakes recovered in the 1982 shovel testing of Survey Area C, it seems reasonable to consider Transect 1, Shovel Hole #6 find as an extension of the distribution of Sc 35 materials. This is further suggested by the fact that a concentration of prehistoric artifacts was not identified during the intense shovel testing at the mapped location of the site. The site, however, should not be considered as positively relocated.

Survey Area D

Description

Survey Area D is a narrow strip along the north side of the Eau Galle River, and east of the confluence of French Creek. For convenience, the area was subdivided into the portion west of the present bridge across the Eau Galle River (Area D), and the portion east of the bridge (Area D-1) (Figure 11). Area D is bounded on the north by a gravel road, to the west by the Corps of Engineers property fence line, and to the south by the Eau Galle River. This portion of the survey area measures approximately 70 meters north-south by 275 meters east-west (4.8 acres). The north boundary of Area D-1 to the east of the bridge is marked by disturbed land. The land immediately adjacent was disturbed during the dam construction, and is indicated on the 1965 aerial photograph (Figure 4). The

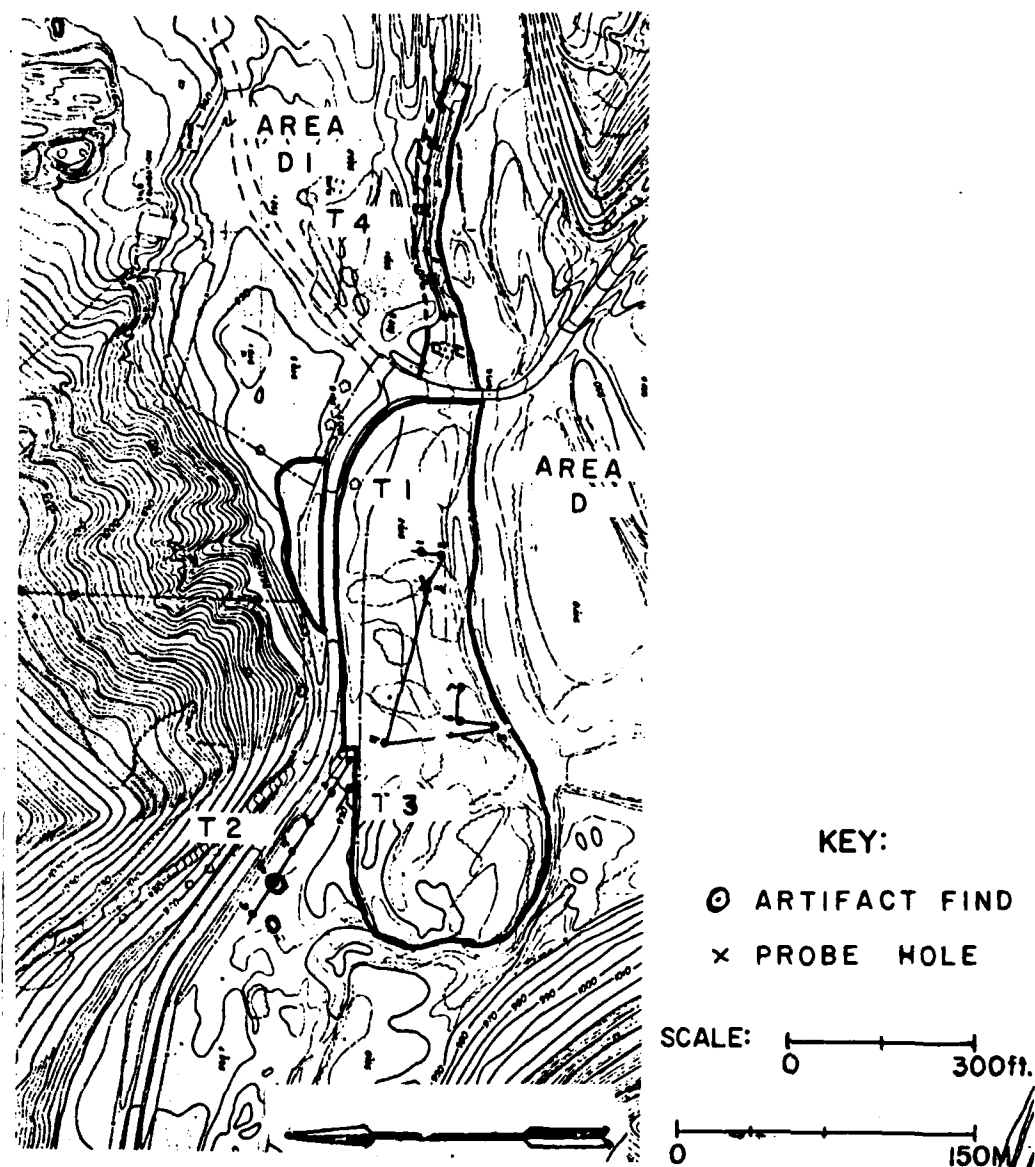


Figure 12. Survey Area D and D-1 (2 foot contour map)

east boundary is not clearly marked. The south boundary is the bank of the Eau Galle River. The Corps of Engineers property fence line follows the slope of the bank. Area D-1 measures 10 meters north-south by 180 meters east-west (.5 acres).

Within Area D to the west of the bridge, and immediately adjacent to the Eau Galle River is a linear rise having the appearance of a natural levee. The land north of the levee within Area D undulates, and has the appearance of being unstable low topography. The surface of Area D-1 to the east of the bridge is higher, and may represent the edge of a relatively high and broad terrace which, as noted above, was disturbed during the dam construction. The vegetation of Area D and D-1 is dominated by box elder, silver maple, and an understory of nettle and briar.

Previous Investigations

Sc 32 (the Geiger Site) was reported in the vicinity of Area D to the west of the bridge. The site was reported in 1964 from information which suggested that numerous artifacts had been collected in this area while it had been cultivated (Kerr 1965:67). In 1964 the area was in pasture, and Kerr's survey team recovered 1 knife base and 3 chert flakes from cattle paths; however, Kerr states that "the exact location of this site could not be determined." It was recommended for testing, but this was not accomplished.

The enlarged U.S.G.S. topographic maps from the 1962 and 1964 surveys place the site to the west of Corps of Engineers owned property in what is now pasture for Robert Geiger's cattle (Figure 2). Mr. Geiger stated that the pasture formerly included what is now Corps of Engineers owned land to the west of the bridge.

Results

Transect 1. The Corps of Engineers property to the west of the bridge (Area D) was not extensively surveyed because initial subsurface testing indicated that the soils had been reworked, and thus the area was not considered likely to contain in situ cultural remains. A series of shovel test holes and soil probes were placed at different topographic settings within Area D (Transect 1), and a profile was cut into the levee bank of

the Eau Galle River about 30 meters east of the confluence of French Creek (Figure 11). None of the excavations produced cultural materials, and the soils consisted of alternating sand and silt lenses and/or gravel, which suggested flood deposition. Portions of a north-south fence line left from pre-reservoir farming are partially extant in the middle of Area D; however, no indication of settlement or other historic activity was identified.

Transects 2 and 3. In order to verify the estimated location of Sc 32 as outside of Corps of Engineers managed property, shovel testing was continued into the pasture of Mr. Geiger, to the north and west of Area D. Permission was obtained from Mr. Geiger to conduct testing within his pasture, and during the interview he stated that the pasture had indeed been cultivated for one season before the Eau Galle Dam was constructed and the reservoir filled. Mr. Geiger made no mention of finding or reporting prehistoric artifacts from the field; however, the site descriptions indicate that the land was owned by Mr. Eugene Geiger at the time of the 1964 survey.

Transect 2 was placed parallel to a northwest-southeast oriented gravel road, and consisted of 6 shovel holes spaced 15 meters apart. Only 1 shovel hole was excavated in Transect 3 because the findings in Transect 2 made it unnecessary to further disturb Mr. Geiger's pasture.

Shovel Holes #3-6 of Transect 2 were located on a minor terrace (950 feet A.S.L.) of French Creek. The soils encountered in these holes were different from those in Area D and in Shovel Holes #1 and #2 of the same transect. The low terrace consists of a deep, dark A-Zone (10YR3/1). This zone extended from the surface to depths of at least 72 cm, and contained fragments of redeposited bedrock.

Shovel Hole #5 of Transect 2 produced several chert flakes and pieces of shatter. Additional prehistoric cultural materials were recovered from a few of the numerous rodent burrow spoil piles in the pasture to the south and west of Transect 2, Shovel Hole #5. Together, these finds correspond with the reported location of Sc 32, and verify that the site is not located within the Corps of Engineers owned or managed property. An attempt to determine the extent of the distribution of materials at Sc 32 was not undertaken, due to the fact that the site is not within the

jurisdiction of the Corps, and in order to avoid further disturbance of Mr. Geiger's pasture. At present, the site is not subject to adverse conditions, although rodent activity does appear to cause some site disturbance.

Transect 4 (Area D-1). Survey to the east of the present bridge over the Eau Galle River consisted of 4 shovel test holes and 3 soil core probes placed in an alternating sequence at 15-meter intervals, from east to west (Transect 4, Figure 11). As noted earlier, this transect followed the top of the high river bank and was outside of the Corps property fence line. The soils encountered in this transect were predominately sandy (10YR3/2-10YR3/3).

Shovel Hole #2 of Transect 4 yielded 1 chert flake. This was the only definite prehistoric artifact recovered from Survey Area D-1. This find is near the reported location of Sc 29 (Hollman-2 Site). Sc 29 was reported by the 1964 survey (Kerr 1965) as being located a short distance to the northwest of Transect 4, Shovel Hole #2, in a former cultivated field of the Myrle Hollman farm. The Hollman farm was severely disturbed during the dam construction period (Figure 4), and is now used as a town dump. Although the reported location of Sc 29 did not extend to the Eau Galle River, it seems likely that the flake recovered in Shovel Hole #2 of Transect 4 represents an extension of that site. If so, the narrow strip of surveyed land along the Eau Galle River is the only remaining undisturbed portion of Sc 29. However, as noted earlier, the 1982 find is not on land owned or managed by the Corps of Engineers.

Approximately 70 meters to the west of Shovel Hole #2 of Transect 4, is a large concrete bridge support. This historic feature is within the Corps Recreation Area property. Additional support features are visible in the channel of the Eau Galle River, and an identical bridge support is located directly across (southeast) from the one observed in Transect 4. The two land-based concrete supports are approximately 5 meters long and stand about 3 meters high. These represent an earlier bridge across the Eau Galle River that was probably associated with the old country road. The age of the bridge is not known; however, historical research could probably determine its age and potential significance.

Survey Area E

Description and Previous Investigations

Area E was identified as the probable location of Sc 27 (Lamb-7 Site). Sc 27 was reported by Kerr as a concentration of lithic debitage 200 yards to the north of Sc 26 and "at the base of the same hill," in the NE $\frac{1}{4}$, SW $\frac{1}{4}$, Sec. 31, T28N, R15W (1965:65-66). Sc 26 was described as located in a cornfield at the base of a hill and 350 yards west of Mr. Lamb's barn (Kerr 1965:64). The enlarged U.S.G.S. topographic maps used to plot the sites located during the 1962 and 1964 surveys indicate Sc 26 and Sc 27 along the base of a steep east-facing hillside, to the south of the Eau Galle River. Sc 27 is plotted at the base of this hill, at a point where the slope curves northeast. A 1965 aerial photograph indicates a long linear cornfield along the base of the steep hillside (Figure 3).

This area is readily recognizable today to the northwest of the Main Day Use Center of the recreation area. In the northwest corner of what would have been the cornfield, the land rises as an alluvial fan at the base of a small ravine from the hillside. Based on the locational description of Sc 27, this raised portion of the field was selected for survey in an attempt to relocate Sc 27.

This area is now fallow and vegetated with goldenrod, milkweed, and sapling trees. To the east and south, the land was wet at the time of our survey, indicating poor drainage. One leg of the "White Pine Trail" follows the base of the raised area. The surveyed area measures 140 m N-S x 75 m E-W (2.5 acres).

Results

A total of 7 shovel test transects were placed in Area E. These were oriented parallel to the hillside, and thus crossed the alluvial fan in a southwest-northeast direction. Transects 1-5 were spaced 15 meters apart, and Transects 6 and 7 were placed between Transects 3, 4, and 5, at a 7.5-meter interval (Figure 12). Shovel holes in Transects 1-5 were spaced 15 meters apart, and those of Transects 6 and 7 were 7.5 meters from each other.

The soils revealed in shovel holes of Transects 1, 2, 3, and 6 (the

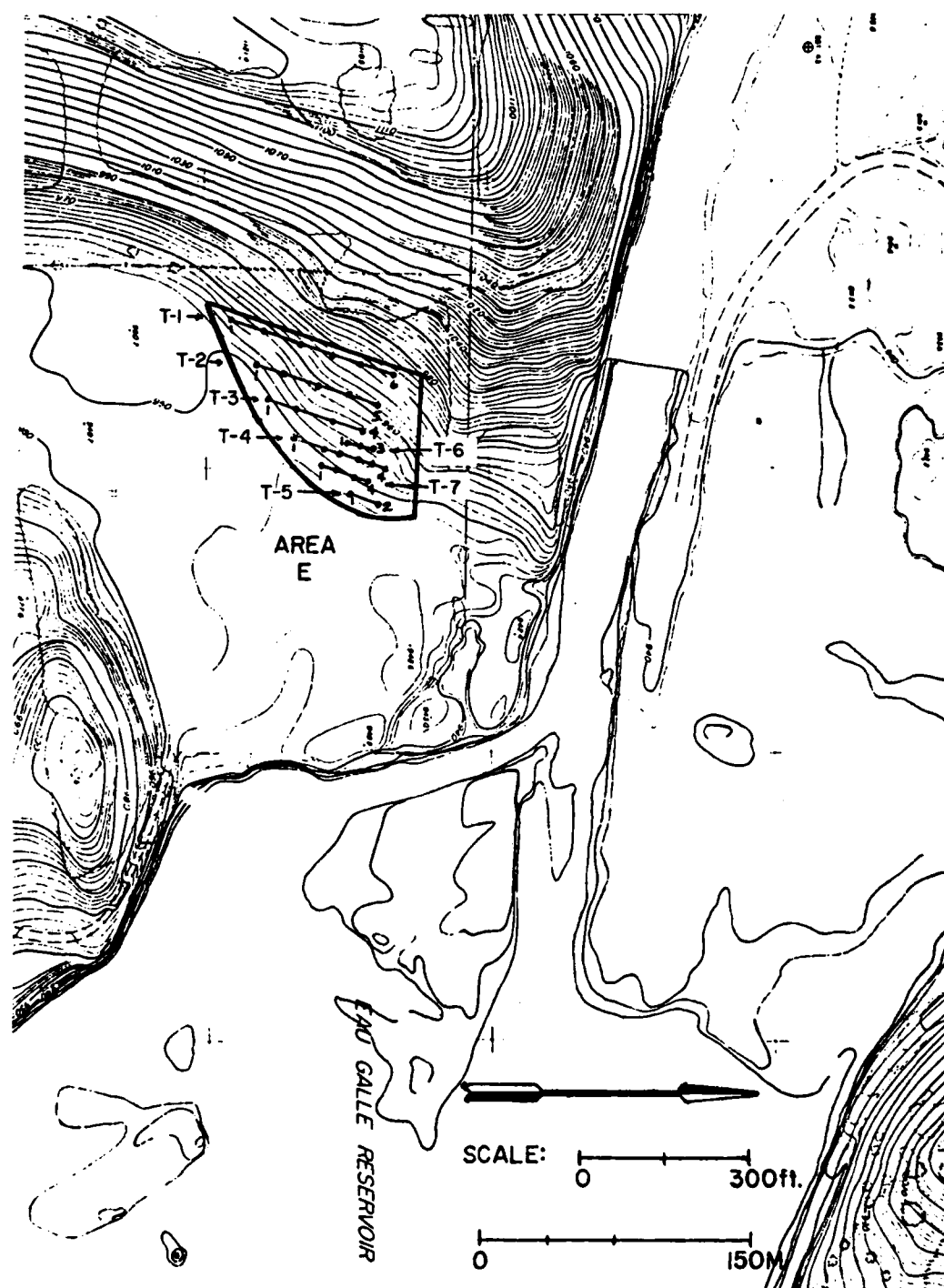


Figure 13. Survey Area E (2 foot contour map)

highest on the alluvial fan) were fairly consistent, and the stratigraphic sequence was designated Soil Profile Type 1 of Survey Area E. This soil type consisted of a silty A-Zone (10YR3/2-10YR3/3), a silty B-Zone (10YR5/3), and a compact silty C-Zone (10YR4/4-5/4). In some shovel holes in these transects the B-Zone was absent. Shovel holes in Transects 4, 5, and 7, to the east and at the low edge of the fan, contained 15-30 cm of gravel capping the Type 1 Soil Profile. This capping represents construction filling in the land below the fan.

No artifactual materials were recovered in any of the Area E shovel holes. Therefore, Sc 27 could not be relocated with the survey methods used, and with the locational information from the original site description.

SUMMARY AND RECOMMENDATIONS

It has been nearly two decades since the initial archaeological investigations were completed at the Eau Galle Reservoir. The intervening period has seen the landscape change from farmland, to parkland surrounding an artificial lake. This period has also witnessed the development of archaeological method and theory, and of cultural resource management practices. Site information, such as that resulting from the 1962, 1964, and 1966 Eau Galle Reservoir surveys and excavations, may now be analyzed to yield more in-depth interpretations about the past. However, in order for this to be accomplished, data collection must be guided by appropriate problem orientations. Because the future will undoubtedly see the development of additional recovery and analysis techniques and further advancements of archaeological theory, proper management of existing cultural resources is critical.

In the case of the Eau Galle Recreation Area, cultural resources management is the responsibility of the St. Paul District Corps of Engineers. These responsibilities have been detailed in a series of federal legislative actions. Given the landscape changes at the recreation area since the initial reporting of the reservoir sites, the Corps of Engineers faced a basic management problem requiring knowledge of the present condition of the reported archaeological sites within the Eau Galle Recreation Area. This problem is complicated by the imprecise site location information in the pre-reservoir survey records.

Therefore, as a first step in fulfilling its cultural resource management role, the St. Paul District Corps sponsored the 1982 survey of specific portions of the Eau Galle Reservoir. The areas designated for this investigation included the possible locations of eight of the previously reported sites. The areas also extended beyond the probable range of these site locations, and it was anticipated that additional cultural resources might be encountered.

The Mississippi Valley Archaeology Center began the 1982 field study with three specific goals: (1) locating the eight previously reported sites; (2) locating any additional cultural resources within the designated survey areas; and (3) assessing the present condition of all cultural

resources encountered within the land owned and/or managed by the Corps of Engineers. Evaluation of those resources for possible significance was not required in this Phase I reconnaissance survey.

The methods used in the field work were hampered by the vegetation cover and by the necessity for relying on shovel testing as the primary survey technique. However, five of the previously reported sites were positively relocated, and one of the other known sites may have been relocated. In addition, three previously unreported sites, one prehistoric and two historic, were located within the survey areas (Fig.14). Furthermore, one previously reported site, the relocation of which was not specifically requested, may have been encountered. The location and condition of each of these sites are discussed below. Finally, recommendations for additional work are presented for several of these sites.

Sc 11 (Larson-3 Site). Cultural materials from this site were encountered in Transect 6 of Survey Area A (NW $\frac{1}{4}$, NW $\frac{1}{4}$, SE $\frac{1}{4}$, SW $\frac{1}{4}$, Sec. 32, T28N, R15W). The site is located along the northwest edge of a truncated alluvial fan (960-970' A.S.L.) overlooking the floodplain of Lohn Creek. This area is currently owned and kept in pasture by Mr. Kenneth Larson. The elevation of the site places it higher than the maximum high water easement (949' A.S.L.) land managed by the Corps of Engineers. Therefore, the Corps of Engineers is not responsible for future management of this site, and recommendations for further investigation are not presented. For other investigators who might be concerned with the cultural resources of this site, it is important to note that the site was originally located by shovel testing, and two controlled excavation units were later placed at the site. The results of both of these studies concluded that the cultural materials were restricted to the disturbed plow zone. The 1982 shovel testing neither contradicts nor verifies that interpretation.

Sc 23 (Larson-4 Site). This site was relocated from the recovery of cultural materials in Transect 2 of Survey Area A, and from an exposure in the south bank of Lohn Creek (SE $\frac{1}{4}$, NW $\frac{1}{4}$, SW $\frac{1}{4}$, SW $\frac{1}{4}$, Sec. 32, T28N, R15W). This area is within Corps-owned land and, therefore, the site to the south of the creek is under the jurisdiction of that agency. A few artifacts also were recovered from surface exposures on the north side of the creek. The latter materials were recovered from Larson's pasture, at an elevation

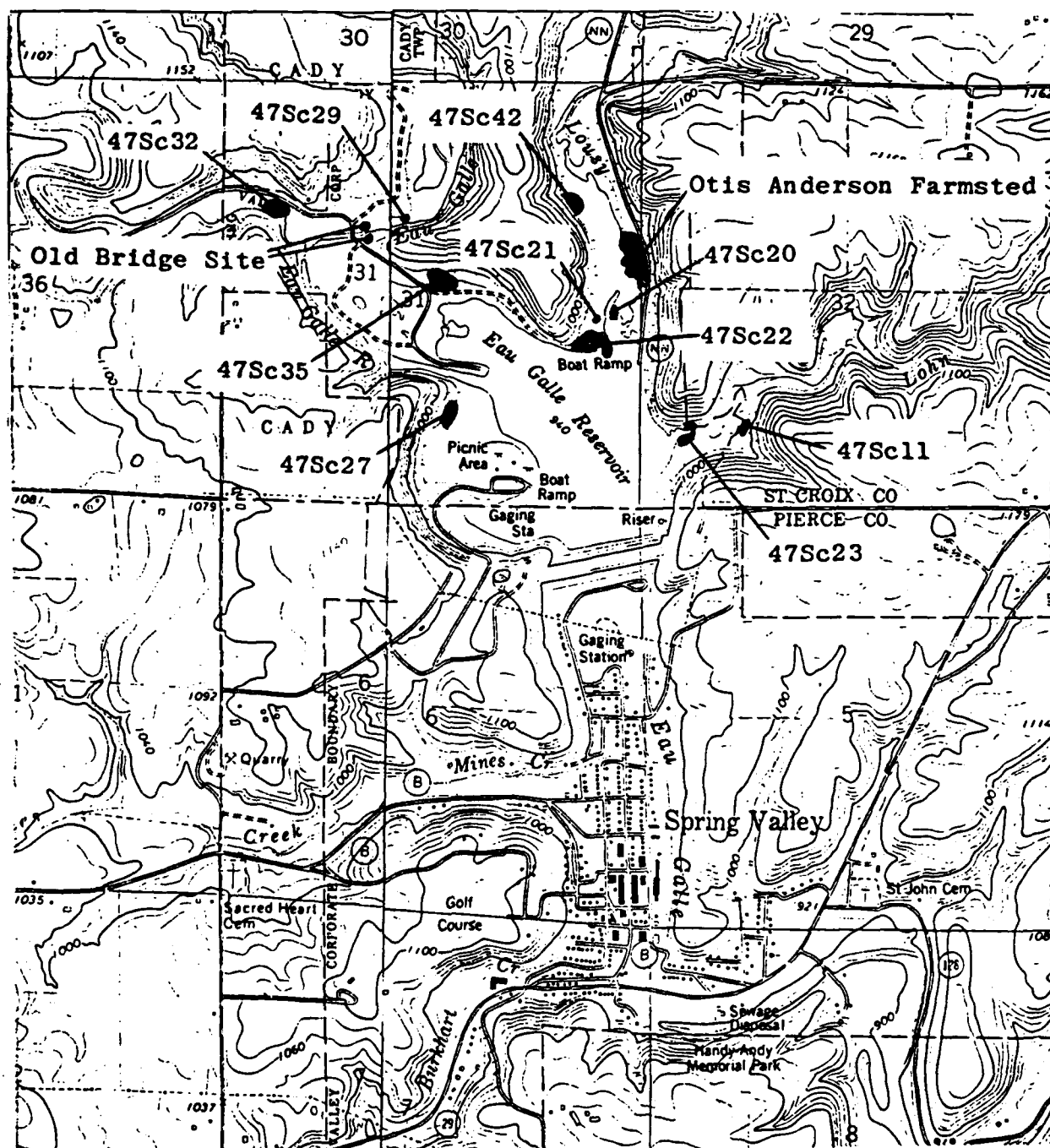


Figure 14. Sites investigated at Eau Galle Recreation Area - 1982. (U.S.G.S. 7.5' Topographical Maps: El Paso and Spring Valley Quadrangles)

(950' A.S.L.) above the Corps-managed high-water easement. The cultural materials from the south side of the creek correspond with Grid B of the test excavations conducted in 1964 at this site. The materials from the north side of the creek appear to correspond to Grid A of the same testing project; however, the 1982 finds were about 40 meters to the east of Kerr's test excavations.

The site area corresponding to Grid B, to the south of the creek, is located in a dense willow thicket in the floodplain of Lohn Creek (945' A.S.L.). This area has been altered since the beginning of the Eau Galle dam construction. The vegetation and creek mouth setting are directly related to the raised water table created by the Eau Galle Reservoir. Also, to the south of Transect 3, a road cut disturbance was encountered that may have impacted the Grid B portion of the site, and thus restricted the remaining portion of the site to a narrow strip between the creek and the former road.

In 1964, Sc 23 was located from materials eroding from the banks of Lohn Creek. Erosion continues to affect the site, and it is impossible to know how much of the site has been destroyed during the last 18 years. The cultural materials from the exposed south bank of Lohn Creek, when found in 1982, were sealed in a buried A Horizon 60-70 cm below the surface. Therefore, other than the creek bank erosion, the remaining portion of the site is not threatened.

Kerr's excavations at Grid B of Sc 23 identified a possible in situ cultural feature ("a possible fire hearth"), suggesting that the site might contain potentially significant cultural remains.

Sc 20 (Anderson-I Site). This site was not relocated by the recovery of cultural materials during the 1982 survey; however, the location of the original 1962 finds was calculated by comparing the original site description records with contemporary and current landscape records. The site location, as estimated, is now a small willow bar (941' A.S.L.) in the wetland mouth of Lousy Creek, at the south end of Survey Area B (NE $\frac{1}{4}$, NE $\frac{1}{4}$, NE $\frac{1}{4}$, SE $\frac{1}{4}$, Sec. 31, T28N, R15W). The present wetland setting at the creek mouth is a response to raised water levels since the inundation of the Eau Galle Reservoir. Inaccessibility precluded shovel testing of the willow bar in 1982; however, it may be suggested that shovel testing would

not have been productive had it been conducted. This judgment is based on the fact that the site was reported from the recovery of only one projectile point from what in 1962 was a cultivated field.

Sc 21 (Anderson-II Site). The reported location of this site corresponds to prehistoric cultural materials that were recovered in Transect 12 of Survey Area B (SW $\frac{1}{4}$, NE $\frac{1}{4}$, NE $\frac{1}{4}$, SE $\frac{1}{4}$, Sec. 31, T28N, R15W). This transect was initiated as one of several designed to intensively shovel test (at 5-meter intervals) the reported location of the site, after initial systematic coverage (at 15-meter intervals) did not recover artifacts. The 1982 finds are analogous to the single shovel hole find in 1962, from which the site was originally reported. However, in 1964 Kerr reported finding additional materials at this location. The site is situated on the raised area at the southwest end of the survey area (944' A.S.L.), and to the west of what was formerly a 90-degree bend in Lousy Creek. The west edge of the old creek bend is recognizable as an eroding bank at the present outlet of Lousy Creek. The site find is well to the west of the erosion, and therefore, is not currently threatened.

Approximately 45 meters to the southeast of the Sc 21 find, and along the shore of the mouth of Lousy Creek, in Transect 6, additional prehistoric cultural remains were recovered. The finds at Transect 6 suggest the possibility that Sc 21 merges with Sc 22 to the south.

Sc 22 (Anderson-III Site). Prehistoric artifacts were recovered from numerous shovel holes on the raised area at the southwest end of Survey Area B, at the south of the location of Sc 21, Transects 1, 2, and 3 (SE $\frac{1}{4}$, NW $\frac{1}{4}$, NE $\frac{1}{4}$, SE $\frac{1}{4}$, and SW $\frac{1}{4}$, NE $\frac{1}{4}$, NE $\frac{1}{4}$, SE $\frac{1}{4}$, Sec. 31, T28N, R15W). These materials extended from the base of the hillside forming the west side of the survey area, to the west side of the Lousy Creek outlet (940-950' A.S.L.). A substantial amount of material was recovered from redeposited contexts along the eroding north shore of the Eau Galle Reservoir. These materials included broken bifaces and worked flakes. Thus, the southern margin of the site is being disturbed continually.

The materials recovered in Transect 3 can definitely be associated with Sc 22, indicating that the site extends at least 25-30 meters north of the reservoir shore. However, the Transect 6 finds are located only 45 meters to the north of Transect 3, suggesting that the site might extend

that far to the north. Based on the available data, it is unclear whether the finds at Transect 6 should be associated with Sc 21 or Sc 22, or whether Sc 21 and Sc 22 are in fact two different sites.

Sc 35 (Longseth-I Site). This site was reported in 1964 from the recovery of prehistoric materials in a cornfield to the north of a country road and east of the Longseth brothers' house. This description corresponds to the southern half of Area C. Systematic shovel testing of Area C recovered possible prehistoric artifacts in Transects 1 and 4, and one definite prehistoric artifact from Transect 1. The unquestionable artifact was found to the north of the former field boundary, and therefore does not correspond to the original location of Sc 35. However, the material distribution within the cornfield is not stated in the original site records, and thus it is likely that the Transect 1 find to the north of the former cornfield represents an extension of the site. More intensive testing at the 1964 location of Sc 35, plotted on enlarged U.S.G.S. topographic maps, recovered only one additional possible prehistoric artifact.

The 1982 survey of Area C may have relocated cultural materials related to Sc 35; however, the lack of unquestionable prehistoric artifacts from the former cornfield area leaves the relocation of the site uncertain. The distribution of possible artifacts from the 1982 survey indicates that the site may extend from Transect 1 to Transect 5, between 990 and 958' A.S.L. (SW $\frac{1}{4}$, SW $\frac{1}{4}$, SW $\frac{1}{4}$, NE $\frac{1}{4}$, Sec. 31, T28N, R15W). The site is currently under no adverse impacts.

Sc 32 (Geiger-I Site). Cultural materials were recovered from Transect 2 on a low terrace (960' A.S.L.) in the pasture of Mr. Robert Geiger, to the northwest of Survey Area D (NE $\frac{1}{4}$, NW $\frac{1}{4}$, SW $\frac{1}{4}$, NW $\frac{1}{4}$, and NW $\frac{1}{4}$, NE $\frac{1}{4}$, SW $\frac{1}{4}$, NW $\frac{1}{4}$, Sec. 31, T28N, R15W). This location corresponds to the 1964 plotted location of the site on the enlarged U.S.G.S. topographic maps, and therefore this site is not on Corps of Engineers owned or managed land. The only damaging impacts to the site are from cattle paths, which lead to some erosion, and rodent activity.

Sc 27 (Lamb-7 Site). Survey Area E was delineated based on the estimated location of this site in the 1964 site records. These records suggested that the site was located on a small alluvial fan to the northwest

of what is now the Main Day Use Area of the Eau Galle Recreation Area. Systematic shovel testing at this location failed to produce a single prehistoric artifact. The reported site description states that numerous prehistoric materials were recovered in 1964. Thus, even with the inadequacies of shovel testing as a survey technique, it is surprising that no materials were recovered. This suggests that the site is not located at the area shovel tested. However, shovel test holes leading to the relatively flat area beneath the alluvial fan indicated that the area had been disturbed (capped with gravel) during the construction of the Eau Galle Dam.

Sc 42 (Lousy Creek Site). This site was located by the recovery of prehistoric cultural materials in Transects 16 and 17 at the north end of Survey Area B, to the west of Lousy Creek (NE $\frac{1}{4}$, NW $\frac{1}{4}$, SE $\frac{1}{4}$, NE $\frac{1}{4}$, Sec. 31, T28N, R15W). The survey records from 1962 and 1964 do not indicate that this area was surveyed, and there is no record of a prehistoric site having been reported at this location. This site has been entered in the Wisconsin Archaeological Codification File and has been designated Sc .

The site lies in the floodplain of Lousy Creek (952' A.S.L.). Materials were recovered from shovel holes, indicating that the site extends over 30 meters west to east, from the base of the hillside, and 45 meters north-south, beginning approximately 40 meters south of the Corps property fence line. No diagnostic artifacts were recovered. It is likely, though not certain, that the site had been cultivated while the land belonged to Otis Anderson. The site is not currently subject to any major disturbances.

Otis Anderson Farmstead. Remains of several historic structures, fence lines, lanes, and artifacts were observed on the top and along the edge of the truncated alluvial bench along the east side of Survey Area B (946-960' A.S.L.). The pre-reservoir land use records indicate that Otis Anderson occupied the bench, and thus the remains may be at least partially attributed to Mr. Anderson's farmstead. The remains were located across the extent of the bench (SE $\frac{1}{4}$, SE $\frac{1}{4}$, SE $\frac{1}{4}$, NE $\frac{1}{4}$, Sec. 31 and SW $\frac{1}{4}$, SW $\frac{1}{4}$, SW $\frac{1}{4}$, NW $\frac{1}{4}$, Sec. 32, T28N, R15W). At least three structures were identified, including a barn foundation and house foundation to the south of a small outlet channel that bisects the bench, and a small outbuilding to the north of the channel. Access lanes are still evident between the barn and house

areas, and near the house a fairly extensive midden is located at the base of the bench. The midden was comprised of food containers and other habitation and farm-related artifacts. Several of the artifacts can be dated to between the 1940's and 1960's; however, the farmstead may date to a much earlier period. Currently, the site is not subject to major disturbances. Nevertheless, exposed artifacts and structural features will continue to deteriorate from natural weathering.

Old Bridge Site. Just to the east of the present bridge over the Eau Galle River near Survey Area D, are the structural remains of an earlier bridge (SW $\frac{1}{4}$, NW $\frac{1}{4}$, SE $\frac{1}{4}$, NW $\frac{1}{4}$, Sec. 31, T28N, R15W). This site consists of concrete foundations and support remains on both sides of the Eau Galle River and in the river bed itself. The age of the old bridge is not known. Because of the solid nature of the remains on this site, and its location on Corps of Engineers property, this site can be considered protected from disturbance.

Sc 29 (Hollman-2 Site). A single prehistoric artifact was recovered on the north bank of the Eau Galle River (950' A.S.L.) of Survey Area D-1 (Transect 4) (SW $\frac{1}{4}$, NE $\frac{1}{4}$, SE $\frac{1}{4}$, NW $\frac{1}{4}$, Sec. 31, T28N, R15W). Although no archaeological site had been reported for this specific location, the find is near the reported location of Sc 29. The former field areas where Sc 29 was located, have been severely disturbed by earthmoving during the period of dam construction of the Eau Galle Reservoir. The river bank area at Transect 4 is the only remaining undisturbed area to the north of the Eau Galle River in this vicinity, and therefore the Transect 4 find might represent the only portion of Sc 29 with in situ archaeological deposits. This find is located just outside of the Corps of Engineers property fence line, and thus future impacts to the site are difficult to predict, although not the responsibility of the Corps of Engineers.

Recommendations

When considered in a regional perspective, the known cultural resources of the Eau Galle Recreation Area and vicinity can be considered significant simply because there has been so little archaeological study undertaken for a wide area surrounding the reservoir. Although the cultural remains which have been identified thus far are not spectacular when compared with other regions, they do represent aspects of cultural adapta-

tions and human behavior within the local prehistoric environment. Archaeological advances since the time of the initial Eau Galle Reservoir studies, make future investigations at those sites which might contain undisturbed cultural deposits potentially more informative. Therefore, investigations following this reconnaissance study will first need to test the contextual integrity of the sites. This would best be accomplished by following guidelines for testing the sites to determine their eligibility to the National Register of Historic Places. Recommendations for such Phase II testing at the Eau Galle Recreation Area sites, which are under the cultural resource management jurisdiction of the St. Paul District Corps of Engineers, are presented below. Of the twelve sites described in this report, Sc 11, Sc 29, and Sc 32 were found not to be located on what is currently Corps of Engineers owned or managed property, and no recommendations are presented for these.

Phase II archaeological testing is recommended for Sc 23, Sc 21, and Sc 22, the newly reported site (Sc), and the location of the charcoal lens in Transect 8 of Survey Area A. In addition, accurate mapping of the historic farmstead and old bridge remains should be undertaken. If construction is planned for either Survey Area C or Survey Area E, additional survey is recommended to attempt to refine the location of Sc 35 and relocate Sc 27. These sites must be relocated before adequate Phase II testing proposal can be formulated. If no potentially disturbing actions are planned for these areas, additional investigations are not necessary.

Phase II test excavations at Sc 23 could be accomplished most efficiently by cleaning the eroding south bank of Lohn Creek. The exposed bank would provide a relatively large sample of the site area, allowing an accurate measurement of the remaining extent of the site in an east-west direction, and offer an evaluation of the integrity of the cultural deposits. As noted earlier, Kerr's 1964 test excavations suggested that in situ cultural features may be contained within the deposits at Sc 23 to the south of the creek. If additional features are encountered in the exposed creek bank, exploratory and recovery excavations should be undertaken.

All excavations should be accurately mapped by establishing a new

site grid. An attempt should be made to tie the new grid with the one established and used by Kerr in 1964. The excavations should be conducted according to acceptable professional standards including maintenance of horizontal and vertical control, screening the soil matrix, collecting soil samples for laboratory processing and analysis, mapping and photographing relevant deposits, etc.

The most likely hindrances in testing Sc 23 are: (1) logistical problems of carrying equipment to and from the site; (2) excavating along the eroding creek bank, which offers little or no shelf for working from; and (3) repairing the bank to prevent further erosion once the investigations are completed. The first of these problems could be solved most easily by utilizing boat transportation from one of the reservoir landings. The second difficulty is not as easily solvable, and it would be up to the investigating archaeologists to deal with creating a workable situation along the creek bank. Protecting the creek bank after it has been exposed could be a costly endeavor, given the most optimal solution of riprapping the bank.

It is felt that the actual archaeological study in the field could be adequately accomplished in a maximum of seven field days, employing a crew of five persons. The time and cost of the laboratory analysis and report writing would depend on the results of the testing; however, using a standard estimate of two days in the laboratory for each day in the field suggests that no more than 14 days should be required for laboratory analysis and report write-up of the testing at Sc 23. The cost for this recommended action is estimated to be approximately \$4,000.

It is also recommended that a single 2x2 meter excavation unit be placed at the location of Transect 8, Shovel Hole #3, in Survey Area A. A buried charcoal lens of unknown origin was uncovered at this location during the 1982 reconnaissance survey. The test excavation might reveal the origins of the burned lens, and if found to be cultural, the excavation would also enable determination of its eligibility to the National Register of Historic Places. This testing could be conducted in conjunction with Phase II testing at Sc 23 due to their close proximity to one another. The single test excavation at Transect 8 could be accomplished in 2 days with two persons. Allowing four days for laboratory analysis

and write-up, the cost for this work would be approximately \$450.

Phase II testing should also be conducted at the raised area at the southwest end of Survey Area B. where Sc 21 and Sc 22 were relocated. For purposes of this testing, these locations should be considered as one site complex. The testing should not only be addressed to determining the eligibility to the National Register of Historic Places, but also for determining whether Sc 21 and Sc 22 are spatially separate sites, or represent the same distribution of cultural materials.

As with Sc 23, shoreline erosion is impacting the southern end of Sc 22, and as the most cost effective means of exposing subsurface deposits, it is recommended that the eroding reservoir shore be faced off to reveal a clean vertical exposure. This would allow an accurate evaluation of the nature of the cultural deposits, and possibly reveal in situ cultural features. If features are identified in the exposed shoreline profile, controlled excavations of these should be undertaken. The excavations should follow acceptable standards such as were mentioned in the recommendations for Sc 23 Phase II testing.

For determining the northern extent of Sc 22, and whether or not this site encompasses the location of Sc 21, a series of 2x2 meter test units should be excavated in a north-south line from the reservoir shoreline to Sc 21. It is felt that if these excavation units are placed at 10-meter intervals, sufficient information about the site deposits, and artifact distribution would be gained to answer these questions. Based on the shovel test location of Sc 21, a total of ten excavation units would be required at the 10-meter interval.

Transportation of equipment to this area will be difficult, and boat access would be the most feasible solution. Shoreline excavation would not be as difficult as at Sc 23, because the sub-water surface gradient is slight, and the reservoir along this shore is shallow. Protection of the bank following the archaeological investigations would be necessary, and potentially costly.

It is estimated that twenty field days with a crew of five persons would be necessary to set up a grid, cut the shoreline face, and excavate the ten 2x2 meter units. The laboratory analysis and write-up would then require approximately 60 days. It is felt that this work could be accom-

plished for a cost of approximately \$15,000.

Phase II testing at the previously unreported site (Sc42) at the northern end of Survey Area B to the west of Lousy Creek, could be accomplished by excavating a series of 2x2 meter test units in either a random or systematic placement. It is estimated that four excavation units would reveal enough information to adequately determine the site's eligibility for the National Register of Historic Places. It would be necessary to establish a grid at the site to maintain horizontal and vertical provenience in the excavations. This work could be accomplished in approximately five field days employing a crew of five, followed by ten days in the laboratory for analysis and report write-up. The cost for this work should be no more than \$3,000.

Both the Otis Anderson Farmstead at the east side of the Survey Area B, and the Old Bridge Site at Area D-1, should be accurately mapped with a survey instrument. These maps would provide the most accurate representation of the spatial distribution of structural features and surface artifact locations. Although no excavation is presently necessary for determining the eligibility of these sites to the National Register of Historic Places, future excavations, if conducted, could be guided by these maps. A thorough literature search and local historical interview program should be conducted for determining the eligibility of these sites. These could identify the ages of the sites and their potential significance to the history of this region. It is also recommended that a complete inventory of identifiable artifacts be made at the Otis Anderson Site. This would allow better interpretation of the farming activities and personal traits of the occupants before natural deterioration destroys many of the exposed artifacts.

The surveying of these sites could be accomplished in one day with a crew of three. The drafting would take one or two days in the laboratory at a total cost of \$250. Inventorying the exposed artifacts at the Otis Anderson Site would require one day for one person at a cost of \$75. A literature search and local historical interview program could be accomplished in a period of approximately ten days, with three additional days for write-up at a cost of about \$950.

In conclusion, it is recommended that the St. Paul District Corps of

Engineers follow up the Eau Galle Recreation Area Phase I Reconnaissance Inventory with Phase II testing at Sc 23, Sc 21 and Sc 22, Sc 42 , and the charcoal lens identified at Transect 8 of Survey Area A. In addition, accurate surveys of the Otis Anderson Farmstead and the Old Bridge Site, combined with a literature search and local history interview program, should be undertaken. These efforts would enable positive or negative evaluations of the eligibility of these sites to the National Register of Historic Places. These investigations could be accomplished for a total cost of approximately \$24,000. The Sc 27 and Sc 35 areas require no further archaeological study, unless plans are made for land alterations which might adversely affect the sites. Such a course of action will allow better management of the cultural resources at the Eau Galle Recreation Area, and insure the future availability of these resources for investigations if and when warranted.

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APPENDIX A

SHOVEL TEST RECORD FORM

PROJECT: Eau Galle

AREA: A

TRANSECT: 1, 2, and 3

DATE: 10/17/82

SHOVEL TEST #	DEPTH	SOIL PROFILE TYPE	MATERIALS
T1 #1	55cm	alluvial muck	-
#2	N/A	N/A	-
#3	50cm	alluvial	-
#4	51cm	black to 40cm b. s. sand below that	-
#5			-
T2 #1	49cm	Zone A sandy silt 0-25 10YR3/3 Zone B gravel 25-49	-
#2	60cm	10YR3/2-3/3 at 60cm	1 chert flake 2 chert shatter
#2A 7M west of #2	60+cm	Zone A 00-20 med. brown sandy silt Zone B 20-28 lt. yellow sand Zone C 28-33 med. brown sandy silt Zone D 33-38 yellowish sandy silt Zone E 38-42 mottled lt br silt Zone F 42-46 dk. yellow sandy silt Zone G 46-49 med. br. sandy silt Zone H 49-54 lt. yellow sand Zone I 54-57 med. brown silt Zone J 57-60 lt. yellow sand Zone K ? med. br. silty sand Bottom ? lt. yellow sand	
#2B 2M east of #2A	86cm	Zone A 00-60 alt. sand/silt Zone B 60-68 sand Zone C 68-72 dk. silt Zone D 72-76 Zone E 76-86 sand	charcoal 56 & 74cm
#3	54cm	solid black	-
T3 #1	50cm	rather sandy to bottom	2 chert shatter
#2	10cm	gravel and rock	-
#3	36cm	limestone and rock	-
#4	40cm	dark silt (moist)	2 small bits natural chert
#5	47cm	" " "	-
#6	50cm	Zone A 00-45cm dk. greyish brown Zone B 45-50cm yellowish more sand	-

SHOVEL TEST RECORD FORM

PROJECT: Eau Galle

AREA: A

TRANSECT: 3, 4, 5, 6, 7, 8, 9

DATE: 10/17/82

SHOVEL TEST #	DEPTH	SOIL PROFILE TYPE	MATERIALS
T3 #7	45 cm	Dark, brown & moist	--
T4 #1	47 cm	Zone A Dark organic sand (plow zone) Zone B Red-brown sterile sand	--
#2	30 cm	" " " "	--
T5 #1	48 cm	" " " "	1 natural broken cher
#2	30 cm	" " " "	--
T6 #1	47 cm	Zone A 0-36 cm 10YR3/2 Zone B 36-?? cm 10YR5/3	charcoal 1 quartzite flake
#2	56 cm	Zone A Plow zone Zone B Grayish clay silty loam	1 small grit-temp. ceramic sherd
			(exfoliated)
			45 tertiary flakes
			4 secondary flakes
		all chert	1 primary flake
			19 shatter
			1 core fragment
#2A (7.5m E of #2)	40 cm	Zone A Plow zone Zone B Light grayish	--
T7 #1	37 cm	Zone A 0-25 cm 10YR3/2 Zone B 25-? cm 10YR4/3	--
#2	40 cm	Zone A Plow zone Zone B Grayish compact clay silt loam	--
T8 #1 (top of rise)	50 cm	Sandy loam	--
#2 (east of rise)	20 cm	Rock, old creek bottom	--
#3 (west of rise, within meander loop)	30 cm	Sandy loam, then rock	--
T9 #1	N/A	Eroded bank near pond at west end of transect - brown sandy soil	Charcoal flecking
#2	55 cm		--
#2A (in meander E. of Sc23A)	40 cm		--

AREA: B

TRANSECT: Shoreline surface collection; 1, 2, 3

DATE: 10/17/82

SHOVEL TEST #	DEPTH	SOIL PROFILE TYPE	MATERIALS
Shoreline surface collection at south edge of Survey Area B. to west of Lousy Creek:			
		3 biface fragments (chert)	
		4 utilized retouched flakes (chert)	
		5 retouched core fragments (chert) (flake preparation?)	
		7 cores/core fragments (chert)	
		4 primary chert flakes	
		198 tertiary chert flakes	
		2 tertiary quartz flakes	
		1 tertiary quartzite flake	
		33 chert shatter	
		1 basalt fragment (ground stone?)	
		1 fire-cracked rock(2)	
		1 chert chunk (unmodified)	
T1	#1	40 cm	3 tert. chert flakes 2 chert shatter 1 fire-cracked rock
T2	#1	50 cm	Type 1 - A Zone to 30 cm Charcoal at 40 cm
	#2	50 cm	Type 1 - A Zone to 21 cm 2 chert flakes, tertiary & shatter
	#3	38 cm	Type 1 A 0-25 cm --
	#4	33 cm	Type 1 B 25-33 cm --
	#5	2	Type 1 A 0-21 cm --
	#6	53 cm	Type 1 B 21-26 cm --
			Type 1 A 0-32 cm 1 prim. quartz flake
			Type 1 B 32-48 cm 2 tert. chert flakes
			1 piece charcoal
T3	#1	28 cm	Type 1 3 tertiary flakes
	#2	39 cm	Type 1 1 tertiary flake
	#3	48 cm	Type 1 2 tertiary flakes
	#4	35 cm	Type 1 Charcoal flecks
	#5	39 cm	Type 1 1 tert. quartz flake
	#6	--	Type 1 2 shatter
			Too wet - edge of bay --

SHOVEL TEST RECORD FORM

69

PROJECT: Eau Galle

AREA: B

TRANSECT: 3, 4, 5, 6

DATE: 10/17/82

SHOVEL TEST #	DEPTH	SOIL PROFILE TYPE	MATERIALS
T3 #7	48 cm	Type 1	2 tert. flake; 1 sec.fl.; 2 shatter
#8	50 cm	Type 1	Charcoal flecks
#9	40 cm	Type 1	1 tertiary flake 1 shatter
#10	33 cm	Type 1 A 0-25 cm B 25-33 cm - green-gray muck (water at 33 cm)	1 fire-cracked rock
10 m SW of #8	32 cm	Type 1 A 0-25 cm B 25-32 cm - green-gray (water at 32 cm)	--
T4 #1	32 cm	Type 1 Depth = Top of C	--
#2	33 cm	Type 1 " " "	--
#3	32 cm	Type 1 " " "	--
#4	38 cm	Type 1 " " "	--
#5	35 cm	Type 1 " = Top of B	--
#6	33 cm	Type 1 " " "	--
#7	33 cm	Type 1 " " "	--
T5 #1	48 cm	Type 1 No B Zone	--
#2	49 cm	Type 1	--
#3	30 cm	Type 1	--
#4	38 cm	Type 1	--
#5	45 cm	Type 1	--
#6	49 cm	Type 1	--
#7	46 cm	Type 1	--
T6 #1	45 cm	Type 1	--
#2	53 cm	Type 1	--

SHOVEL TEST RECORD FORM

PROJECT: Eau Galle

AREA: B

TRANSECT: 6, 7, 8, 9, 10

DATE: 10/17/82

SHOVEL TEST #	DEPTH	SOIL PROFILE TYPE	MATERIALS
T6 #3	55 cm	Type 1	Square nail (horseshoe)
#4	44 cm	Type 1	1 possible shatter
#5	52 cm	Type 1	--
#6	55 cm	Type 1	2 tertiary flakes 5 pieces charcoal
T7 #1	56 cm	Type 1	Zone A 0-41 cm Zone B 41-49 cm 2 FCR 45 cm deep Charcoal in B Zone
#2	53 cm	Type 1	Zone A 0-36 cm Zone B 36-50 cm 1 historic coal 1 historic slag
#3	47 cm	Type 1	Zone A 0-37 cm Zone B 37-43 cm --
#3A (5m E of #3)	52 cm	Type 1	--
#4	43 cm	Type 1	Zone A 0-27 cm Zone B 27-43 cm --
#5	41 cm	Type 1	Zone A 0-29 cm Zone B 29-38 cm --
T8 #1	42 cm	Type 1	Depth = Top of C --
#2	60 cm	Type 1	" " " --
#3	50 cm	Type 1	" " " 1 broken chert (cobble or FCR?); 1 broken quartzite (cobble?)
#4	34 cm	Type 1	" " " --
T9 #1	32 cm	Zone A Brown Zone B Brown/grey	*
#2	32 cm		*
#3	33 cm		*
#4	40 cm		*
		*4 possible FCR; location in Transect 9 unknown	
T10 #1	50 cm	Zone A 31 cm; not well developed, may be disturbed from road. Zone B 31-? cm, sand	--

SHOVEL TEST RECORD FORM

PROJECT: Eau Galle

AREA: B

TRANSECT: 10, 11, 12, 13, 14, 15

DATE: 10/17/82

SHOVEL TEST #	DEPTH	SOIL PROFILE TYPE	MATERIALS
T10 #2	70 cm	Type 1	--
T11 #1 (10m S, 5m W of T7 #3)	45 cm	Type 1	--
#2 (10m S of T7 #3)	38 cm	Type 1	Zone A 0-24 cm Zone B 24-31 cm --
#3 (10m S, 5m E of T7 #3)	40 cm	Type 1	Zone A 0-21 cm Zone B absent --
T12 #1 (5m S of T7 #3)	44 cm	Type 1	--
#2 (5m S of T7 #4)	50 cm	Type 1	3 tertiary chert flakes 1 tertiary quartz flake 1 chert shatter 1 fire-cracked rock 4 broken chert (FCR?) 7 broken quartzite (FCR?) 1 sandstone 1 round hard nail 2 cinders
#3 (5m S of T7 #5)	39 cm	Type 1	1 chert shatter
T13 #1 (5m N, 5m W of T7 #3)	43 cm	Type 1	--
#2 (5m N of T7 #3)	47 cm	Type 1	--
#3 (5m N, 5m E of T7 #3)	43 cm	Type 1	--
T14 #1 (5m N of T8 #2)	51 cm	Type 1	Zone A 0-37 cm Road disturbance Zone B 37-45 cm --
#2 (5m N of T8 #3)	53 cm	Type 1	--
#3 (5m N of T8 #4)	41 cm	Type 1	--
T15 #1 (10m N of T8 #1)	37 cm	Type 1	Zone A 0-30 cm Zone B 30-45 cm --
#2 (10m N of T8 #2)	50 cm	Type 1	--
#3 (10m N of T8 #4)	45 cm	Type 1	--

SHOVEL TEST RECORD FORM

PROJECT: Eau Galle

AREA: B

TRANSECT. 15, 16

DATE: 10/17/82

SHOVEL TEST #	DEPTH	SOIL PROFILE TYPE	MATERIALS
T15 #4 (10m N of T8#4)	45 cm	Type 1	--
T16 #1A	50 cm	Solid dark silt 10YR2/1	--
#1B	50 cm	Solid dark silt 10YR2/1	--
#1	50 cm	Dark silt	--
#2	55 cm	" "	--
#3	50 cm	" "	--
#4	50 cm	" " 10YR3/3	--
#5	70 cm	Lighter silt, clay at bottom	--
#6	77 cm	Silt A Zone 0-35 cm 10YR3/2 B Zone 35-? cm	--
#7	70 cm	Silty A Zone 0-30 cm 10YR3/3 Sandy B Zone 30-50 cm 10YR4/4 Silt C Zone 50-? cm 10YR3/2	--
#8	70 cm	Alternating silt and sand A Zone 0-37 cm 10YR3/2 B Zone 37-55 cm 10YR3/3 C Zone 55-? cm 10YR3/1	--
#9	59 cm	Similar to #8: A Zone 0-31 cm B Zone 31-56 cm	--
#9.5	47 cm	Zone A 0-27 cm 10YR3/2 Zone B 27-33 cm 10YR3/3 (silt) Zone C 33-? cm 10YR2/1	3 tert. chert flakes 2 chert shatter 1 prim. quartzite fl. 3 natural bedrock
#10	39 cm	Zone A 0-26 cm light Zone B 26-39 cm dark Zone C 39-? cm	1 second. chert flake 1 natural bedrock
#11	55 cm	Zone A 0-29 cm 10YR3/2 Zone B 29-53 cm 10YR3/3 Zone C 53-? cm 10YR3/1	--
#12	40 cm	Zone A silt with sand 0-12 cm 10YR3/2 Zone B sand with silt 12-20 cm 10YR3/2 Zone C silt 20-37 cm 10YR3/2 Zone D silt/clay 37-? cm 10YR4/3	--

SHOVEL TEST RECORD FORM

PROJECT: Eau Galle

AREA: B

TRANSECT: 17, 18, 19, 20

DATE: 10/24/82

SHOVEL TEST #	DEPTH	SOIL PROFILE TYPE	MATERIALS
T17 #1	54 cm	Zone A silty 0-27 cm 10YR3/2 Zone B silty 27-53 cm 10YR3/1 Zone C clay 53-? cm 10YR3/2	1 tertiary flake 12 chert shatter
#2	51 cm	Zone A silty 0-36 cm 10YR3/1 Zone B silty 36-50 cm 10YR3/3 Zone C clay 50-? cm 10YR3/2	7 tertiary flakes 1 secondary flake 4 chert shatter
#3	56 cm	Zone A silt 0-29 cm 10YR3/2 Zone B silt 29-50 cm 10YR3/3 Zone C clay 50-? cm 10YR3/2	3 tertiary flakes 1 secondary flake
#4	67 cm	Similar to #1-3	2 flakes
#5	57 cm	Similar to #1-4	1 chert shatter
#6	36 cm	Similar to #1-5	1 chert shatter
T18 #1	56 cm	Mottled silt/sands: Zone A 0-38 cm 10YR3/2 Zone B 38-? cm 10YR3/3	--
T19 #1	50 cm	Zone A Medium brown silt with sand Zone B Orange silt	2 chert shatter
#2	50 cm	Similar to #1	Natural rock
#3	50 cm	Similar to #1 and #2	--
#4	35 cm	Road gravel and sand	--
#5	50 cm	Similar to #1, 2, and 3	--
T20 #1	68 cm	Zone A silty 0-25 cm 10YR3/2 Zone B mottled 25-? cm 10YR3/3	Charcoal flecks
#2	54 cm	Zone A 0-17 cm 10YR3/2 Zone B 17-30 cm 10YR5/4 Zone C 30-36 cm 10YR4/4 Zone D 36-? cm 10YR3/3	Charcoal flecks
#3	53 cm	Similar to #2	Charcoal flecks
#4	54 cm	Similar to #2 and 3	--
#5	50 cm	Similar to #2, 3, and 4	--

SHOVEL TEST RECORD FORM

PROJECT: Eau Galle

AREA: C

TRANSECT: 1, 2, 3

DATE: 10/16/82

SHOVEL TEST #	DEPTH	SOIL PROFILE TYPE	MATERIAL
T1 #1	50 cm	Type 1	1 possible
#2	50 cm	Type 1 (Zone B absent)	chert shat
#3	50 cm	Type 1 (Zone B absent)	--
#4	50 cm	Type 1	--
#5	35 cm	Type 1	--
#6	35 cm	Type 1	--
T2 #1	50 cm	Type 1 (Zone A disturbed)	--
#2	50 cm	Type 1	Charcoal f
#3	50 cm	Type 1	--
#4	50 cm	Type 1	--
#5	Base of B Zone	Type 1	--
#6	45 cm	Type 1	--
#7	45 cm	Type 1	--
#8	47 cm	Type 1	--
T3 #1	54 cm	Type 1	--
#2	50 cm	Type 1	1 possible broke 1 piece me
#2A (5m W of #2)	56 cm	Type 1	Charcoal
#2B (5m E of #2)	53 cm	Type 1	Charcoal
#2C (5m N, 10m E of #2)	50 cm	Type 1	--
#2D (10m E, 5m S of #2)	45 cm	Type 1	--
#2E (10m E, 10m N of #2)	31 cm	Type 1	--
#2F (5m E, N of #2)	40 cm	Type 1	--
#2G (5m E, of #2)	68 cm	Type 1	--

SHOVEL TEST RECORD FORM

PROJECT: Eau Galle

AREA: C

TRANSFECT 3, 4

DATE: 10/16/82

SHOVEL TEST #	DEPTH	SOIL PROFILE TYPE	MATERIALS
T3 #3	50 cm	(charcoal possibly Type 1 from burned tree root)	Abundant charcoal, Zone B
#3A (1m W of #3)	15 cm	Type 1 mottled	Charcoal flecks
#4	50 cm	Type 1	Bits of charcoal in plow zone
#5 (50 x 50 cm)	50 cm	Type 1	--
#6	38 cm	A Zone is 27 cm deep	--
T4 #1	50 cm	Type 1	--
#2	50 cm	Type 1	--
#2A (5m W of #2)	53 cm	Type 1	Zone A 0-48 cm black Zone B 48-50 cm grey
#2B (5m N of #2A)	46 cm	Type 1	Zone A 0-30 cm Zone B 30-40 cm
#2C (10m N of #2)	40 cm	Type 1	Zone A 0-30 cm Zone B 30-35 cm
#2D (5m N of #2)	42 cm	Type 1	Zone A 0-30 cm Zone B 30-40 cm
#2E (5m E of #2)	47 cm	Type 1	Zone A 0-36 cm Zone B 36-47 cm
#2F (5m N of #2)	60 cm	Type 1	Zone A 0-38 cm Zone B 38-56 cm
#2G (10m N of #2E?)	42 cm	Type 1	Zone A 0-24 cm Zone B 24-34 cm
#2H (5m S of #2)	41 cm	Type 1	Zone A 0-26 cm Zone B 26-41 cm
#2I (10m E of #2)	48 cm	Disturbed	Zone A 0-33 cm Zone B 33-48 cm
#2J (5m N, 10 m E of #2)	49 cm	Type 1	Zone A 0-36 cm Zone B 36-46 cm
#3	50 cm	Type 1	--
#4	50 cm	Type 1	Tar paper, charcoal
#5	50 cm	Type 1	--
#6	30 cm	Type 1	Charcoal
#7	45 cm	Type 1 (B Zone 20 cm thick)	Charcoal
#8	38 cm	Type 1 (E Zone 20 cm thick)	Charcoal

SHOVEL TEST RECORD FORM

PROJECT: Eau Galle

AREA: C

TRANSECT. 5, 6, 7, 8

DATE: 10/16/82

SHOVEL TEST #	DEPTH	SOIL PROFILE TYPE	MATERIALS
T5 #1	50 cm	Type 1	Charcoal
#2	50 cm	"	--
#3	50 cm	"	--
#4	50 cm	"	--
#5	50 cm	"	--
T6 #1	50 cm	" (thin B Zone)	--
#2	50 cm	"	--
#3	50 cm	" (B Zone 10-12 cm thick)	--
#4	50 cm	" (B Zone 4 cm thick)	--
#5	50 cm	"	--
#6	50 cm	"	Charcoal
#7	50 cm	"	--
#8	45 cm	" (B Zone 20 cm thick)	--
T7 #1	33 cm	"	--
#2	30 cm	"	--
#3	35 cm	"	--
#4	37 cm	"	--
#5	33 cm	"	--
T8 #1	25 cm	"	--
#2	40 cm	"	--
#3	40 cm	"	--
#4	38 cm	"	--

SHOVEL TEST RECORD FORM

PROJECT: Eau Galle

AREA: C

TRANSECT:

DATE: 10/16/82

SHOVEL TEST #	DEPTH	SOIL PROFILE TYPE	MATERIALS
T8 #5	30 cm	Type 1	--
#6	32 cm	"	--
T9 #1	35 cm	"	--
#2	54 cm	" A Zone 0-46 cm	--
#3	48 cm	" A Zone 0-38 cm	--
#4	40 cm	" B Zone 38-48 cm	--
#5	42 cm	" A Zone 0-25 cm	--
#6	28 cm	" B Zone 25-35 cm	--
		" A Zone 0-24 cm	--
		" B Zone 24-42 cm	--
		" A Zone 0-20 cm	--
		" B Zone absent	--
T10 #1	65 cm	" A Zone 0-58 cm	--
#2	50 cm	" A Zone 0-36 cm	--
#3	42 cm	" B Zone 36-49 cm	--
		" A Zone 0-30 cm	--
		" B Zone 30-40 cm	--
T11 #1	50 cm	"	--
#2	53 cm	"	--
#3	51 cm	"	--
T12 #1	37 cm	"	--
#2	35 cm	"	--
#3	30 cm	"	--
T13 #1	36 cm	" A Zone 0-24 cm	--
#2	47 cm	" B Zone 24-34 cm	--
#3	35 cm	" A Zone 0-30 cm	--
		" A Zone 0-20 cm	--

SHOVEL TEST RECORD FORM

79

PROJECT: Eau Galle

AREA: C

TRANSECT. 14, 15, 16, 17, 18

DATE: 10/16/82

SHOVEL TEST #	DEPTH	SOIL PROFILE TYPE	MATERIALS
T14 #1	28 cm	Type 1	--
#2	45 cm	"	--
T15 #1	22 cm	"	--
T16 #1	30 cm	"	Chert shatter
#2	27 cm	"	A Zone 0-20 cm B Zone 20-27 cm 1 chert chunk, small cobbles
#3	40 cm	"	A Zone 0-33 cm B Zone 33-40 cm --
#4	30 cm	"	A Zone 0-22 cm B Zone 22-29 cm Chert shatter
#5	40 cm	"	A Zone 0-20 cm --
#6	36 cm	"	A Zone 0-16 cm B Zone 16-36 cm --
#7	42 cm	"	A Zone 0-20 cm B Zone 20-40 cm --
#8	31 cm	"	A Zone 0-12 cm B Zone 12-31 cm --
T17 #1	56 cm	" Thin B zone	Chert shatter
#2	48 cm	" " "	--
#3	45 cm	" No B Zone	--
#4	40 cm	" Thin B Zone	Chert shatter
#5	45 cm	"	--
#6	50 cm	" Thin B Zone	--
#7	45 cm	"	--
T18 #1	31 cm	"	Chert shatter
#2	40 cm	"	--
#3	42 cm	"	--

SHOVEL TEST RECORD FORM

PROJECT: Eau Galle

AREA: C

TRANSECT: 19, 20

DATE: 10/16/82

[illegible]

SHOVEL TEST RECORD FORM

PROJECT: Eau Galle

AREA: D

TRANSECT. 1, 2; Rodent backdirt near 1

DATE: 10/23/82

SHOVEL TEST #	DEPTH	SOIL PROFILE TYPE	MATERIALS
T1 #1	70 cm	Zone A 0-13 cm dark organic sandy silt Zone B 14-34 cm lt. coarse sand Zone C 35-48 cm br. sandy silt laminated with light silt Zone D 49-65 cm lt. coarse sand Zone E 66-70 brown sand	Small pebbles Rough chert
#2 (10m S of #1, on levee)	30 cm	Zone A 0-10 cm brown sand/silt Zone B 10-20 cm light sand Zone C 20-30 cm brown sand/silt with much large gravel	--
#3 (15m W of #1)	probe	Zone A 0-10 cm brown sand/silt Zone B 10-23 cm light coarse sand Zone C 23-47 cm " " " Zone D 47-71 cm " " "	
#4 (30m W of old fence line)	72 cm	Zone A 0-12 cm dark silt Zone B 12-24 cm fine grained sand brown (wet) Zone C 24-48 cm sand (30-34 cm slightly coarse) Zone D 48-72 cm sand and water	
#5 (bank cut)	N/A	Zone A 0-21 cm dark brown sand/silt Zone B 22-43 cm medium brown silt/sand Zone C 43-53 cm dark brown sandy silt Zone D 53-83 cm light coarse sand Zone E 83-103 cm dark brown sandy silt with rounded rock	--
#6	60 cm	Zone A 0-22 cm Zone B 22-? cm	sandy lenses --
#7	53 cm	Zone A 0-13 cm Zone B 13-20 cm Zone C 20-? cm	sandy lenses
T2 #1	50 cm	Mixed silts and clays	--
#2	56 cm	Silts and clays	5 chert shatter
#3	86 cm	Dark silt loam	--
#4	60 cm	Dark silt loam	Eroded bedrock
#5	72 cm	Dark silt loam, sandy layer at base	1 tertiary flake 2 secondary flakes 2 chert shatter
#6	50 cm	Dark silt loam 10YR3/1	Eroded bedrock
Rodent backdirt	N/A	7.5 m N, 5m W of T1 #6	1 flake
Rodent backdirt	N/A	ca. 100m W of T1 #6	2 flakes

SHOVEL TEST RECORD FORM

PROJECT: Eau Galle

AREA: D

TRANSECT 3, 4

DATE: 10/23/82

[illegible]

SHOVEL TEST RECORD FORM

PROJECT: Eau Galle

AREA: E

TRANSECT: 1, 2, 3, 4

DATE: 10/17/81

SHOVEL TEST #	DEPTH	SOIL PROFILE TYPE	MATERIALS
T1 #1	50 cm	Zone A 0-17 cm (silt) 10YR4/2 Zone C 17-? cm 10YR4/4 No B Zone for soil Type 1; C Zone hard and compact	--
#2	40 cm	Zone A 0-20cm silt 10YR3/2 Type 1 Zone B 20-30cm silt 10YR5/3 Zone C 30-? cm silt 10YR4/3, compact	Chert shatter
#3	44 cm	Zone A 0-26 cm 10YR3/2 Zone B 26-36 cm (mottled with Zone C 10YR5/3 Zone C 36-? cm compact 10YR5/4	--
#4	50 cm	Zone A 0-29cm 10YR3/2 Zone B 29-35cm 10YR5/3 Zone C 35-? cm 10YR4/4, compact	--
#5	50 cm	Zone A 0-25cm 10YR3/2 Zone B 25-33cm 10YR5/3 Zone C 33-? cm 10YR4/4, clay silt	--
#6	30 cm	Zone A 0-21 cm 10YR3/3 Zone B absent Zone C 21-? cm clay silt 10YR4/4	--
T2 #1	38 cm	"	--
#2	35 cm	"	--
#3	30 cm	"	--
#4	43 cm	"	--
T3 #1	33 cm	"	--
#2	41 cm	" (No B Zone)	--
#3	22 cm	"	--
#4	29 cm	"	--
T4 #1	53 cm	" with gravel cap (0-30cm)	--
#2	54 cm	" with sand cap (0-15cm)	--

SHOVEL TEST RECORD FORM

PROJECT: Eau Galle

AREA: E

TRANSECT: 4, 5, 6, 7

DATE: 10/17/82

[illegible]

APPENDIX B

MISSISSIPPI VALLEY ARCHAEOLOGY CENTER CATALOGUING SYSTEM
AS APPLIED TO THE EAU GALLE RECREATION AREA SURVEY 1982

The cataloguing system adopted by the Mississippi Valley Archaeology Center is based on a coded trinomial format which provides storage and retrieval information including the year of the project, the provenience of the materials, and the quantity and kind of artifacts. The first set of numbers in this code refer to the year of the project.

All of the materials recovered during the Eau Galle survey are catalogued with the prefix 82 for 1982. The second set of numbers refers to the provenience from which the artifacts were recovered. During the Eau Galle Recreation Area Survey, materials were recovered from a total of 59 proveniences. The corresponding accession numbers for these proveniences are 82.1300 - 82.1358. Accession numbers before 82.1300 have been assigned to materials recovered from other projects undertaken in 1982. Finally, each artifact from each provenience receives a separate number. For example, 1 chert flake and 2 pieces of chert shatter were recovered from shovel hole 2 of transect 2 in Survey Area A at the Eau Galle Recreation Area. The catalog numbers for these materials are 82.1302.01, 82.1302.02, and 82.1302.03 indicating the year (82), the provenience (.1302 = Area A, Transect 2, shovel hole 2), and each artifact (.01 = the chert flake, and .02 and .03 = the 2 pieces of chert shatter). A list of all of the catalog numbers assigned to the Eau Galle Recreation Area survey materials accompanies this Appendix.

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LAST CATALOGUE #	Provenience		LOT #
	Site		
82.1300.01-01	Sc23	Area A, Surface-cattle path	
82.1301.01	"	" Lohn Creek bank	
82.1302.01-03	"	" T-2, S.h. 2	
82.1303.01-02	"	" T-3, S.h. 1	
82.1304.01-02	"	" " S.h. 4	
82.1305.01	"	" T-5, S.h. 5	
82.1306.01	Sc11	" T-6, S.h. 1	
82.1307.01-71	"	" " S.h. 2	
82.1308.01-260	Sc22	Area B Shoreline collection	
82.1309.01-06	"	" T-1, S.h. 1	
82.1310.01-02	"	" T-2, S.h. 2	
82.1311.01-03	"	" " S.h. 6	
82.1312.01-03	"	" T-3, S.h. 1	
82.1313.01	"	" " S.h. 2	
82.1314.01-02	"	" " S.h. 3	
82.1315.01-03	"	" " S.h. 5	
82.1316.01-05	"	" " S.h. 7	
82.1317.01-02	"	" " S.h. 9	
82.1318.01	"	" " S.h. 10	
82.1319.01	"	" T-6, S.h. 3	
82.1320.01	"	" " S.h. 4	
82.1321.01-02	Sc21?	" " S.h. 6	
82.1322.01-02	"	" T-7, S.h. 1	
82.1323.01-02	"	" " S.h. 2	
82.1324.01-02	"	" T-8, S.h. 3	
82.1325.01-04	"	" T-9	
82.1326.01-21	Sc21?	" T-12, S.h. 2	
82.1327.01	"	" " S.h. 3	
82.1328.01-09	Sc42	" T-16, S.h. 9.5	

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LAST CATALOGUE #	Provenience		LOT #
	Site		
82.1329.01-02	Sc42	Area B, T16, S.h. 10	
82.1330.01-13	"	" T-17, S.h. 1	
82.1331.01-12	"	" " S.h. 2	
82.1332.01-04	"	" " S.h. 3	
82.1333.01-02	"	" " S.h. 4	
82.1334.01		" " S.h. 5	
82.1335.01		" " S.h. 6	
82.1336.01-02		" T-19, S.h. 1	
82.1337.01		" " S.h. 2	
82.1338.01	Sc35?	Area C, T-1, S.h. 1	
82.1339.01	"	" " S.h. 2	
82.1340.01	"	" " S.h. 6	
82.1341.01-02		" T-3, S.h. 2	
82.1342.01-02	Sc35?	" T-4, S.h. 2E	
82.1343.01	"	" " S.h. 4	
82.1344.01		" T-16, S.h. 1	
82.1345.01-		" " S.h./2	
82/1346.01		" " S.h. 4	
82.1347.01		" T-17, S.h. 1	
82.1348.01		" " S.h. 4	
82.1349.01		" T-18, S.h. 1	
82.1350.01-		Area D, T-1, S.h. 1	
82.1351.01-05		" T-2, S.h. 2	
82.1352.01		" " S.h. 4	
82.1353.01-05	Sc32	" " S.h. 5	
82.1354.01	"	" Rodent spoil 1	
82.1355.01-02	Sc32?	" " " 2	
82.1356.01		" T-4, S.h. 2	
82.1357.01		" " S.h. 3	
82.1358.01		Area D, T-1, S.h. 2	

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LAST CATALOGUE #	Provenience	LOT #
	Site	
82.1329.01-02	Sc42 Area B, T16, S.h. 10	
82.1330.01-13	" " T-17, S.h. 1	
82.1331.01-12	" " " S.h. 2	
82.1332.01-04	" " " S.h. 3	
82.1333.01-02	" " " S.h. 4	
82.1334.01	" " S.h. 5	
82.1335.01	" " S.h. 6	
82.1336.01-02	" T-19, S.h. 1	
82.1337.01	" " S.h. 2	
82.1338.01	Sc35? Area C, T-1, S.h. 1	
82.1339.01	" " " S.h. 2	
82.1340.01	" " " S.h. 6	
82.1341.01-02	" T-3, S.h. 2	
82.1342.01-02	Sc35? " T-4, S.h. 2E	
82.1343.01	" " " S.h. 4	
82.1344.01	" T-16, S.h. 1	
82.1345.01-	" " S.h./2	
82/1346.01	" " S.h. 4	
82.1347.01	" T-17, S.h. 1	
82.1348.01	" " S.h. 4	
82.1349.01	" T-18, S.h. 1	
82.1350.01-	Area D, T-1, S.h. 1	
82.1351.01-05	" T-2, S.h. 2	
82.1352.01	" " S.h. 4	
82.1353.01-05	Sc32 " " S.h. 5	
82.1354.01	" " Rodent spoil 1	
82.1355.01-02	Sc32? " " " 2	
82.1356.01	" T-4, S.h. 2	
82.1357.01	" " S.h. 3	
82.1358.01	Area E T-1, S.h. 2	

APPENDIX C

SCOPE OF WORK AND RESUMES OF
PRINCIPAL INVESTIGATOR AND PROJECT DIRECTOR

SCOPE OF WORK
CULTURAL RESOURCES INVESTIGATION
OF EAU GALLE RESERVOIR

90

1.00 INTRODUCTION

1.01 The Contractor will undertake a cultural resources reconnaissance inventory of portions of the Corps-owned lands in and adjacent to Eau Galle Dam and Reservoir.

1.02 This cultural resources inventory is in partial fulfillment of the obligations of the Corps of Engineers (Corps) regarding cultural resources, as set forth in the National Historic Preservation Act of 1966 (Public Law (P.L.) 89-665), as amended; the National Environmental Policy Act of 1969 (P.L. 91-190); Executive Order (E.O.) 11593 for the "Protection and Enhancement of the Cultural Environment" (Federal Register, 13 May 1971); the Archaeological and Historical Preservation Act of 1974 (P.L. 93-291); the Advisory Council on Historic Preservation "Regulations for the Protection of Historic and Cultural Properties (36 CFR Part 800); the Department of the Interior guidelines concerning cultural resources (36 CFR Part 60); and the Corps of Engineers regulations (ER 1105-2-50).

1.03 The laws listed above establish the importance of Federal leadership, through the various responsible agencies, in locating and preserving cultural resources within project areas. Specific steps to comply with these laws, particularly as directed in P.L. 93-291 and E.O. 11593, are being taken by the Corps ". . . to assure that Federal plans and programs contribute to the preservation and enhancement of non-federally owned sites, structures, and objects of historical, architectural, or archaeological significance." A part of that responsibility is to locate, inventory, and nominate to the Secretary of the Interior all such sites in the project area that appear to qualify for listing on the National Register of Historic Places.

1.04 Executive Orders 11593 and the 1980 amendments to the National Historic Preservation Act further direct Federal agencies ". . . to assure that any federally owned property that might qualify for nomination is not inadvertently transferred, sold, demolished or substantially altered." In addition, the Corps is directed to administer their policies, plans, and programs so that federally and non-federally owned sites, structures, and objects of historical, architectural, or archaeological significance are preserved and maintained for the inspiration and benefit of the people.

1.05 This cultural resources investigation will serve several functions. The report will be a planning tool to aid the Corps in meeting its obligations to preserve and protect our cultural heritage. It will be a comprehensive, scholarly document that not only fulfills federally mandated legal requirements but also serves as a scientific reference for future professional studies. It will identify sites which may require additional investigations and which may have potential for public-use development. Thus, the report's content must be analytical in nature, not just descriptive.

2.00 PROJECT DESCRIPTION

2.01 The Eau Galle Reservoir is located in southeastern Wisconsin on the Eau Galle River, a tributary of the Chippewa River. The reservoir is just north of Spring Valley, Wisconsin, and straddles the Pierce County-St. Croix County line. The Eau Galle Reservoir is approximately 50 miles east of the Twin Cities and 40 miles west of Eau Claire, Wisconsin.

2.02 The Eau Galle Dam and Reservoir and downstream channel improvements were authorized by the Flood Control Act of 1958 (P.L. 85-500). The St. Paul District, Corps of Engineers, began construction in 1965 and completed it in 1969. At conservation pool elevation (940 feet m.s.l.), the reservoir covers approximately 150 surface acres. At elevation 940 feet, the reservoir shoreline totals about 5½ miles.

2.03 Archaeological surveys of the Eau Galle Reservoir area were conducted in 1962 and 1964 by the State Historical Society of Wisconsin in cooperation with the National Park Service. These surveys were limited to the flood pool area and the expected elevation of 1028.0 feet.

2.04 Fifteen archaeological sites were located during the 1962 survey conducted by A. Dewey Buck and Bent Thygesen. The results of this survey are available in a report entitled Archaeological Survey of the Eau Galle Reservoir, Spring Valley, Wisconsin.

2.05 The 1964 survey was conducted by Hank Kerr. This survey resulted in the location of an additional 10 sites. Five of the 1962 sites were also tested. The results of this survey and testing program are available in a report entitled Archaeology of the Eau Galle River Valley Dam Salvage Program.

2.06 In addition to the two surveys conducted in the Eau Galle Reservoir area, site 47 SC 24 was excavated by the State Historical Society of Wisconsin in 1966. The results of this excavation are available in a report entitled Excavations at Lamb-5 Site (47 SC 25) Saint Croix County, Wisconsin (also published in The Wisconsin Archaeologist, New Series, Volume 49, No. 1, March, 1968). This excavation was also in cooperation with the National Park Service.

2.07 In 1980, the St. Paul District contracted for a cultural resource investigation of all Corps-owned land at Eau Galle Reservoir. This survey was conducted by Archaeological Field Services, Inc. This contract was terminated prior to completion.

3.00 DEFINITIONS

3.01 For the purpose of this study, the cultural resources investigation will include a Phase I on-the-ground reconnaissance level survey. Phase II testing will not be conducted at this time.

3.02 "Cultural resources" are defined to include any building, site, district, structure, object, data, or other material relating to the history, architecture, archaeology, or culture of an area.

3.03 "Literature search" is defined as an examination and review of written reports, books, articles, etc., published and unpublished, which are pertinent to the cultural resources investigation to be carried out for a particular project. The purpose of the literature search is to familiarize the Contractor with the cultural history of the study area and past investigations which have been carried out in the area, and to provide this information in a summarized form to the agency requesting the search. While the existing data could be extensive, the literature search should be as comprehensive as possible in providing a usable body of data for the purposes outlined above.

3.04 "Records review" is defined as the examination and review of records, files, etc., which are maintained by various local and State agencies. The purpose of the records review is to document the location of known sites which may exist within the project area, their condition, the extent of past work undertaken at the site, and any other information which may be relevant in assessing the significance of the site.

3.05 "Phase I cultural resources survey" is defined as an intensive, on-the-ground survey and testing of an area sufficient to determine the number and extent of the resources present and their relationship to project features. A Phase I cultural resources survey will result in data adequate to assess the general nature of the sites present; a recommendation for additional testing of those resources which, in the professional opinion of the Contractor may provide important cultural and scientific information; and detailed time and cost estimates for Phase II testing.

3.06 "Phase II testing" is defined as the intensive testing of those sites which may provide important cultural and scientific information. Phase II testing will result in data adequate to determine the eligibility of the resources for inclusion on the National Register of Historic Places, a plan for the satisfactory mitigation of eligible sites which will be directly or indirectly impacted, and detailed time and cost estimates for mitigation.

4.00 SURVEY SPECIFICATIONS

4.01 The Contractor will conduct on-the-ground surveys at Eau Galle Reservoir in an effort to locate and assess the present condition of the following known sites: SC 11, SC 20, SC 21, SC 22, SC 23, SC 27, SC 32, and SC 35.

4.02 The reported locations of these sites are shown on the inclosed Map A. It should be noted that none of these site locations are exact and it is the responsibility of the Contractor to relocate these sites within the areas where they were previously recorded.

4.03 It is also the responsibility of the Contractor to collect whatever literature and records are necessary to aid in the relocation of the above sites. However, a formal literature search and records review will not be required for this contract.

4.04 On-the-ground Phase I surveys will also be conducted in those areas outlined on Map B with the intent to locate and assess the condition of any sites located in these areas that have not been previously recorded.

5.00 PERFORMANCE SPECIFICATIONS

5.01 The Contractor will utilize a systematic, interdisciplinary approach in conducting the study. The Contractor will provide specialized knowledge and skills during the course of the study to include expertise in archaeology and other social and natural sciences as required.

5.02 The extent and character of the work to be accomplished will be subject to the general supervision, direction, control, review and approval of the Contracting Officer.

5.03 Techniques and methodologies used during the investigation shall be representative of the current state of knowledge for their respective disciplines.

5.04 The Contractor shall keep standard field records which shall include, but not be limited to, field notebooks, site survey forms, field maps, and photographs.

5.05 The tested areas will be returned as closely as practical to presurvey conditions by the Contractor.

5.06 The recommended professional treatment of recovered materials is curation and storage of the artifacts at an institution that can properly insure their preservation and that will make them available for research and public view. The Contractor will be responsible for making curatorial arrangements for any collections which are obtained. Such arrangements must be coordinated with the appropriate officials of Wisconsin and approved by the Contracting Officer.

5.07 When sites are not wholly contained within the Corps-owned land, the Contractor shall survey an area outside the right-of-way limits large enough to include the entire site within the survey area. This procedure shall be done in an effort to delineate site boundaries and to determine the degree to which the site will be impacted.

5.08 The Contractor shall provide all materials and equipment as may be necessary to expeditiously perform those services required of the study.

Phase I Survey

5.09 The on-the-ground examination will involve an intensive survey and shovel testing of the area to determine the number and extent of cultural resources present. This includes standing structures as well as historical and prehistorical archaeological sites.

5.10 The Contractor's survey will include surface inspection in areas where surface visibility permits adequate recovery of cultural materials and subsurface testing in all areas where surface visibility is limited or obscured. Subsurface investigation will include shovel testing, coring, soil borings, cut bank profiling or some other appropriate testing method. If field methods vary from those required, they must be described and justified in the report.

5.11 The required survey grid or transect interval is 15 meters (50 feet) and testing interval is 15 meters (50 feet). However, this interval may vary depending upon field or site density/size conditions. If the recommended interval is not used, written justification should be presented in the technical report for selection of an alternate interval. All subsurface tests will be screened through 1/4-inch mesh hardware cloth and will be recorded on appropriate testing forms. All subsurface testing forms will be included in the appendix to the Contractor's report. The Contractor will also indicate the locations of all subsurface tests on USGS and/or project maps and key these with the testing forms in the appendix.

6.00 GENERAL REPORT REQUIREMENTS

6.01 Upon completion of field work, the Contractor will submit to the Contracting Officer a brief field report detailing the work accomplished. Upon completion of all field investigations and research, the Contractor shall prepare a technical report detailing the work done, the results, and the recommendations for testing and associated time and cost estimates for those resources found to have potential for the National Register.

6.02 The technical report shall include, but not be limited to, the following sections. These sections do not necessarily need to be discrete sections; however, they should be readily discernable to the reader.

a. Title page: The title page should provide the following information: the type of survey undertaken (reconnaissance, intensive); the cultural resources assessed (archaeological, historical, architectural); the project name and location (county and State); the date of the report; the Contractor's name; the contract number; the name of the author(s) and/or Principal Investigator; the signature of the Principal Investigator; and the agency for which the report is being prepared.

b. Abstract.

c. Table of Contents.

d. Introduction: This section should include the purpose of the report; a description of the proposed project; the location of the proposed project, including a map of the general area; and a project map (a list of USGS quadrangle maps which cover the project area should also be included); identify who conducted the study; the number of people involved in the study; and the dates during which the field survey was conducted. The introduction shall also contain the name of the institution where recovered materials will be curated.

e. Environmental Setting: This section should contain a brief description of the environment of the study area, both present and past conditions.

f. Field Methods: Describe specific archaeological, historical, and architectural activities undertaken to achieve the stated theoretical and methodological goals. Include all field methods, techniques, strategies, and a rationale or justification for specific methods or decisions. The description of the field methods shall minimally include: a description of the areas surveyed, survey conditions, topographic/physiographic features, vegetation conditions, soil types, informal testing, stratigraphy results, survey limitations, survey testing results with all appropriate testing forms to be included as an appendix (e.g., shovel tests, coring, cut bank profiles, etc.), degree of surface visibility, whether or not the survey resulted in the location of any cultural resources, the methods used to survey the area (pedestrian reconnaissance, subsurface test, etc.), the justification and rationale for eliminating uninvestigated areas, and the grid or transect interval used. Testing methods shall include descriptions of test units (size, intervals, stratigraphy, depth) and the rationale behind their placement.

g. Laboratory Methods: This section should explain in detail the laboratory methods employed and the rationale behind the method selected. This section should also contain references to accession numbers used for all collections, photographs and field notes obtained during the study, and the location where they are permanently housed.

h. Investigation Results: This section should describe the prehistoric and historic archaeological resources encountered in the survey, with each site discussed as a separate unit. The site description should include the size of the site, type of site (i.e., prehistoric village, mound group, etc.); the cultural component(s) of the site (if discernable); and the general nature of the site as it existed at the time of the survey. An inventory of cultural material recovered from sites may be included in this section or added to the site survey forms.

Accession numbers for collected cultural material should be included as a part of the inventory. Inventoried sites shall include a site number. Official site designations assigned by an appropriate State agency are preferred. However, if temporary site numbers will be used in either the draft or final reports, they shall be substantially different from the official site designations to avoid confusion or duplication of site number.

i. Recommendations: For those sites encountered, the Contractor shall make recommendations for the adequate assessments of those sites considered to have potential for eligibility to the National Register of Historic Places. This assessment will not proceed to the level described in paragraph 3.06. These recommendations should include a time and cost estimate for Phase II testing. If it is the Contractor's assessment that no significant resources exist in the area, the methods of investigation and reasoning which support that conclusion will be presented. If certain areas are not accessible, recommendations will be made for future consideration. If it is found that significant resources do exist in the area, the report will describe the information recovered and where the resources were located, and will assess the extent and potential of the recovered information. Any evidence of cultural resources or materials which have been previously disturbed or destroyed will be presented and explained. Specific recommendations for the preservation and protection of any potentially significant sites located during the survey shall be made. These recommendations shall be developed in a manner in which they may be incorporated into an effective management plan for all cultural resources at the Eau Galle Reservoir.

j. References: All references must follow American Antiquity format.

k. Appendix: This section should contain the Scope of Work and the resumes of the Principal Investigator and crew. State site forms shall also be included as an appendix.

l. All sites identified in the course of the study, including find spots and known sites, will be presented on State site forms as an appendix to the report. Data should also be provided about the present condition of the sites (disturbance by natural or manmade processes) and content of any collections from the sites. Known sites shall have their State site forms updated as necessary. All State site forms will be submitted to the State Archaeologist.

m. The location of all sites and other features discussed in the text will be shown on 8½ X 11 inch legibly photocopied USGS map sections and will be bound into the report. Project maps shall also be included as part of contract correspondence showing the relationship of sites to the project areas as well as areas surveyed. In addition, the project map will show those areas that have been eliminated from survey due to lake levels or swampy conditions. Maps should also show the type of survey method employed for each area surveyed (example, pedestrian walkover, shovel tests) and formal test pits, if applicable. All maps will be labeled with a description, a north arrow, a scale bar, township and range (on USGS maps only), and the map source (e.g., the USGS quad name or published source).

n. Failure to fulfill these report requirements will result in the rejection of the report by the Contracting Officer.

7.00 FORMAT SPECIFICATIONS

7.01 Text materials will be typed (single-spaced or space-and-a-half) on good quality bond paper, 8.5 inches by 11.0 inches, with a 1.5-inch binding margin on the left, 1-inch margins on the top and right, and a 1.5-inch margin at the bottom.

7.02 All figures and maps must be clear, legible, self-explanatory, and of sufficiently high quality to be readily reproducible by standard xerographic equipment, and will have margins as defined above.

7.03 All figures must be readily reproducible by standard xerographic equipment.

7.04 Negatives of all black and white photographs contained in the final report must be included so that copies for distribution can be made.

8.00 SUBMITTALS

8.01 The Contractor will submit reports according to the following schedules:

a. Project Field Notes: One legible copy of all the project field notes will be submitted with the draft contract report.

b. Draft Contract Report: Ten copies of the draft contract report will be submitted on or before _____ days after contract award. The draft contract report will be reviewed by the Corps of Engineers, the State Historic Preservation Officer, the State Archaeologist, and the National Park Service. The draft contract report will be submitted according to the report and contract specifications outlined in this Scope of Work.

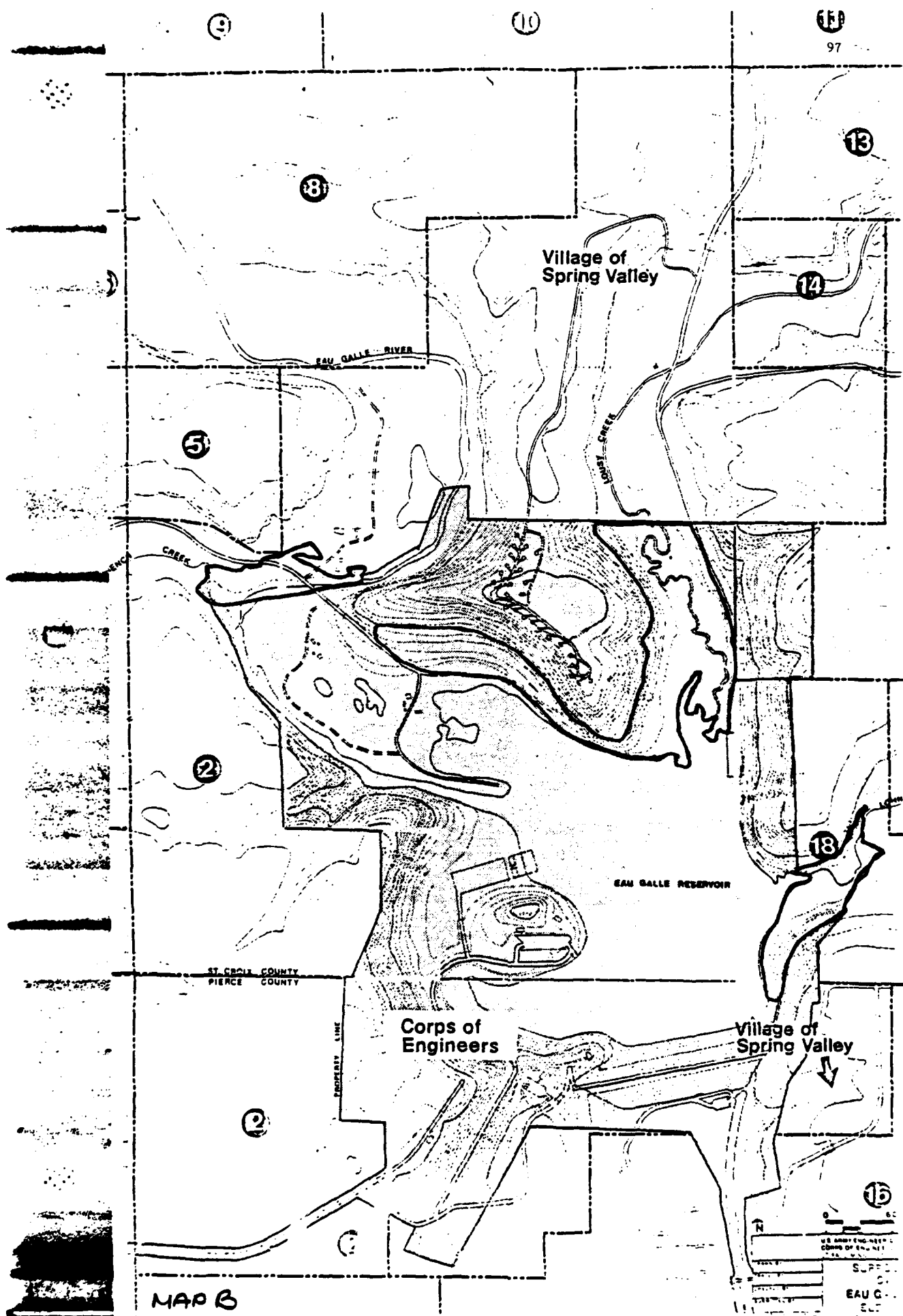
c. Final Contract Report: The original and 15 copies of the final contract report will be submitted 60 days after the Corps of Engineers comments on the draft contract report are received by the Contractor. The final contract report will incorporate all the comments made on the draft contract report.

8.02 Neither the Contractor nor his representative shall release any sketch, photograph, report, or other material of any nature obtained or prepared under the contract without specific written approval of the Contracting Officer prior to the acceptance of the final report by the Government. After the Contracting Officer has accepted the final report, distribution will not be restricted by either party except that data relating to the specific location of extant sites will be deleted in distributions to the public.

8.03 All materials, documents, collections, notes, forms, maps, etc. which have been produced, gathered or acquired in any manner by the Contractor for use in the completion of this contract shall be made available to the Contracting Officer upon request.

9.00 METHOD OF PAYMENT

9.01 Requests for partial payment under this fixed price contract may be requested monthly on ENG Form 93. A 10-percent retained percentage will be withheld from each partial payment. Upon approval of the final contract report by the Contracting Officer, final payment, including previously retained percentage, shall be made.



10

98

13

8

Village of Spring Valley

14

EAU GALLE RIVER

5

LOUIS CREEK

CREEK

SC 22

SC 25

SC 21

SC 20

SC 22

2

SC 27

EAU GALLE RESERVOIR

18

SC 11

SC 23

ST. CROIX COUNTY
PIERCE COUNTY

Corps of Engineers

Village of Spring Valley

PROPERTY LINE

2

16

N

0 1 2 3 4 5 6 7 8 9 10

U.S. ARMY ENGINEERING CENTER OF GRAVITY

SCALE

SUPPLY

EAU GALLE

ET

MAP A

GENERAL INFORMATION:

Name: James Patrick Gallagher

PII Redacted

Present Position and Academic Rank: Associate Professor, University of Wisconsin-La Crosse; Executive Director, Mississippi Valley Archaeology Center at the University of Wisconsin-La Crosse.

EDUCATION:

B.S. Anthropology, Saint Louis University, 1964

M.A. Anthropology, Southern Methodist University, 1969

Ph.D. Southern Methodist University, 1977

Dissertation Title: Ethnoarchaeological and Prehistoric Investigations in the Ethiopian Central Rift Valley.

PROFESSIONAL EXPERIENCE: TEACHING

University of Oklahoma, teaching assistant, 1966-67

Trinidad Jr. College, Trinidad, Colorado, director of archaeology field school, 1968

Southern Methodist University, teaching assistant, 1969

Southern Methodist University, Instructor, University College, 1970, 1972

El Centro College, Dallas, Texas, Instructor, 1972-1977

University of Wisconsin-La Crosse, 1977 - Present

RESEARCH

Archaeologist, Illinois State Museum (J. Caldwell), summer 1963

Archaeologist, Wisconsin State Museum excavations at Aztalan (J. Freeman), summer 1964

Research Assistant, University of Oklahoma Spiro Mound Project (J. Brown), 1964-66

Archaeologist, University of Oklahoma (R. Bell), summer 1965

Ethnographer, one semester ethnographic project in Kiowa Apache material culture (A. Ricciardelli) 1964, University of Oklahoma

Archaeologist, excavations at Roc de Combe, France (F. Bordes) 1966

Research Assistant, Southern Methodist University Nubian Prehistoric Project (J. Shiner), 1967-68

Field Director, archaeology field school, Trinidad Jr. College, Trinidad, Colorado, 1968

Archaeologist, excavations at Peche de l'Aze, France (F. Bordes), 1969

Archaeologist, excavations at Ksar A'Quil, Lebanon (J. Tixier), 1969

Field Director, Southern Methodist University Ethiopian Prehistoric Expedition (F. Wenjorff), 1971-72

Principal Investigator, Ethiopian Ethnoarchaeology Project, 1971-72

Field Director, Egyptian Predynastic Project (F. Hassan), 1978

Principal Investigator, archaeological excavations at the Valley View Site, 1978, 1979

Principal Investigator, La Crosse Area Archaeological Survey I, 1979

Principal Investigator, Overhead Site excavation, 1980

Principal Investigator, La Crosse Area Archaeological Survey II, 1980 & 1981

Principal Investigator, Quail Cave excavation, 1981

Principal Investigator, Sand Lake Coulee Project, 1982

Principal Investigator, La Crosse Area Archaeological Survey III, 1982

Principal Investigator, excavations at the Dahl Site, 1982

CULTURAL RESOURCE MANAGEMENT PROJECTS

1977

Archaeological survey of the proposed Chippewa River Crossing, Buffalo Co., Wis., Dairyland Power Cooperative, La Crosse.

Archaeological survey of the Holmen Industrial Park. Village of Holmen, Wis.

1978

Archaeological survey of the Alma-Tremval and Alma-Crystal Powerline transmission route (81 miles). Dairyland Power.

Archaeological survey of sewer and water pipe line routes in Medary Township. City of La Crosse.

Archaeological survey of by-pass route in the City of La Crosse. City of La Crosse.

Timber Coulee Creek Survey, Vernon County. Wisconsin Department of Natural Resources.

Archaeological Survey of Lake Marinuka, Galesville, WI. Lake Marinuka Protection and Rehabilitation District.

An archaeological inspection of the Pigeon Creek Bridge area, Trempealeau Co. Westbrook Associates.

1979

Archaeological survey of transmission line routes and substation location in Vernon County. Dairyland Power.

An archaeological inspection of a proposed waste water treatment facility near Dorchester, Clark County, Wis. ETC Engineering Inc.

An archaeological survey of Copeland Park. City of La Crosse.

An archaeological inspection of the Gillett St. viaduct and approaches. City of La Crosse.

An archaeological inspection of a proposed powerline route near Mauston, Juneau Co. Dairyland Power.

An archaeological inspection of a waste water treatment site at Alma, Buffalo Co. ETC Engineering.

An archaeological survey at Brice Prairie, La Crosse Co. Dairyland Power.

An archaeological inspection at Coon Valley, Vernon County. ETC Engineering.

An archaeological survey of Pine Creek, Trempealeau Co. Westbrook Associates.

An archaeological inspection of a bridge crossing site on the Little Baraboo River, Sauk Co. Westbrook Associates.

An archaeological survey of a portion of the Little Grant River, Grant Co. Wisconsin Department of Natural Resources.

An archaeological survey in St. Croix County. Dairyland Power.

An archaeological survey of the proposed right-of-way for County Highway A in Monroe Co. Donahue and Associates.

An archaeological survey of a sewage disposal site at Stoddard, Vernon Co. ETC Engineering.

1980

Thunderbird Hills Archaeological survey, La Crosse, WI. Neitzel Engineering Co.

An archaeological survey of the Washco Substation, Washington County, Wis. Dairyland Power Cooperative.

An archaeological survey of the Comfort Substation in Northern Wisconsin. Dairyland Power Cooperative.

An archaeological survey of the proposed County Highway B project, La Crosse County.

An archaeological survey of the proposed Genoa, Wisconsin-Lansing, Iowa transmission route. Dairyland Power Cooperative.

An archaeological inspection of the Fairchild Site. Dairyland Power Cooperative.

The Potosi substation and transmission route. Dairyland Power.

An archaeological survey of the Pammel Creek area. La Crosse, Wi. U.S. Corps of Engineers.

Phase II excavations at Pammel Creek. U.S. Corps of Engineers.

Phase II testing at sites along the proposed transmission line at Elk River, Minnesota.

An archaeological survey of the Hannibal power line route. Dairyland Power.

1981

An archaeological survey at Viola, Wis. ETC Engineering.

Cultural resources investigation at Steuben, Wis. substation site. Dairyland Power

A cultural resources investigation at Wittenburg Park, City of La Crosse.

CTH 'OS' archaeological survey, La Crosse County.

An archaeological survey of the Sherco Benton Power Line, St. Cloud, Minnesota. Northern States Power Co.

A Phase I and Phase II study of the proposed Holmen sewer line and treatment site. Village of Holmen, Wis.

Riceford transmission line and substation, Riceford, Minnesota. Dairyland Power.

Root River Channelization Project, Houston Co., Minnesota. U.S. Corps of Engineers.

Archaeological testing of the southern end of Goose Island, Vernon Co., Wi. U.S. Corps of Engineers.

An archaeological inspection of a dredge spoil site in Trempealeau, Wis. U.S. Corps of Engineers.

Archaeological excavations (Phase I & II) of the proposed wastewater treatment site at Coon Valley, Wis. Village of Coon Valley.

OTHER

Participant, summer seminar and field study in Egyptian civilization and culture, Ain Shams University, Cairo, 1975

Director, Center for Research Archaeology, La Crosse, Wisconsin, 1977-1981

Board of Advisors, Institute for Minnesota Archaeology

HONORS AND AWARDS

Fellow, Institute for the Study of Earth and Man, Southern Methodist University, Dallas, Texas

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

Wisconsin Archaeological Survey
 Wisconsin Archaeological Society
 Society for American Archaeology
 Association of Iowa Archaeologists
 Minnesota Archaeological Society
 Society of Africanist Archaeologists in America
 Iowa Archaeological Society

PUBLICATIONS AND PAPERS PRESENTED

1965 Gallagher, J.P., Michael Davis, and Fred Schneider, "Plains Indian German Silverwork in the Anadarko, Oklahoma Area". Papers in Anthropology, 6:22-40, University of Oklahoma, Norman.

1973 Gallagher, J.P., "Preliminary report on archaeological research near Lake Zuai, Ethiopia" Annales d'Ethiopie, 9:64-80, Ethiopian Archaeological Institute, Addis Ababa.

1973 Gallagher, J.P., "Ethiopian Ethnoarchaeology" paper presented at the Conference of Africanist Archaeologists, April 16, 1973, Southern Methodist University, Dallas, Texas.

n.d. Gallagher, J.P., "Ethnoarchaeology in south central Ethiopia", Proceedings of the VIIth Pan African Congress of Prehistory and Quaternary Studies, in press, Addis Ababa.

1974 Gallagher, J.P., "Preparation of hides with stone tools in south central Ethiopia", Journal of Ethiopian Studies, 13 (1):177-182, Institute of Ethiopian Studies, Addis Ababa.

- 1977 Gallagher, J.P., "Ethiopian Research", Nyame Akuma, 11:11-14.
- 1977 Gallagher, J.P., "Contemporary Stone Tools in Ethiopia: Implications for Archaeology", Journal of Field Archaeology, 4:407-414.
- n.d. Hassan, Fekri A., T.R. Hays, and J.P. Gallagher, "Recent Excavations of Predynastic Sites in the Nagada-Khattara Area, Upper Egypt", in press, Nyame Akuma.
- 1979 Gallagher, J.P., "Excavations at the Valley View Site, a fortified Oneota village near La Crosse, Wis.", paper presented at the 1979 meeting of the Society for American Archaeology, Vancouver, B.C.
- 1979 Gallagher, J.P., "The Valley View Site, An Orr Focus Village near La Crosse", paper presented at the Midwest Archaeological Conference, October 13, 1979, Milwaukee, Wis.
- 1979 Gallagher, J.P., Katherine Stevenson, and James Theler, "The Valley View Site (47Lc34), an Orr Phase Oneota Site at La Crosse, 1979 Excavations and Analysis." Technical report on file, State Historical Society of Wisconsin, Madison.
- n.d. Gallagher, J.P. and Katherine Stevenson, "Oneota Subsistence and Settlement in Southwestern Wisconsin", Minnesota Anthropological Papers I, (in press).
- 1980 Gallagher, J.P., "La Crosse Area Archaeological Survey, 1979 Season". Technical Report on file, State Historical Society of Wisconsin, Madison.
- 1980 Gallagher, J.P. and Katherine Stevenson, "Oneota Subsistence and Settlement in Southwestern Wisconsin". Paper presented at the Midwest Archaeological Conference, Oct. 5, Chicago.
- 1980 Fekri Hassan, T.R. Hays, J.P. Gallagher, et al, "Towards a Model of Agricultural Developments in Predynastic Egypt". Paper presented at the International Symposium on the Origin and Early Development of Food Producing Cultures in North-Eastern Africa, Poznan Poland, Nov. 15.
- 1980 Gallagher, J.P. and Katherine Stevenson, Preliminary Report on excavations at the Valley View Site (47Lc34), an Oneota Village near La Crosse, Wisconsin Archaeologist, vol. 61 #4.
- 1980 Fekri Hassan, T.R. Hays, J.P. Gallagher, et al, "Agricultural Developments in the Nagada, Egypt region during the Predynastic Period". Paper presented at the annual meeting of the American Research Center in Egypt, 13-15 April, San Francisco. Published in Nyame Akuma, vol. 17, 1980.
- 1980 Gallagher, J.P. and Katherine Stevenson, "The Overhead Site - - a Multicomponent Site on the Mississippi River at La Crosse." Paper presented at the Midwest Archaeological Conference, Oct. 4, Chicago.
- 1981 Gallagher, J.P., Katherine Stevenson, et al, "The Overhead Site". Technical Report on file at the State Historical Society of Wisconsin.

1982 Gallagher, J.P., Roland Rodell, and Katherine Stevenson, "The 1980-1982 La Crosse Area Archaeological Survey". Reports of Investigations Number 2, Mississippi Valley Archaeology Center, La Crosse, Wisconsin.

1982 Gallagher, J.P. and Robert Boszhardt, "The Dahl Site". Reports of Investigations Number 1, Mississippi Valley Archaeology Center, La Crosse, Wisconsin.

VITAE

ROBERT F. BOSZARDT

PII Redacted

AREA OF INTEREST: Prehistoric Adaptations and Cultural Change in the Upper Mississippi River Valley and Western Upper Great Lakes.

ACADEMIC HISTORY: University of Wisconsin-Waukesha Center, 1972-1974.
University of Wisconsin-Milwaukee, Bachelor of Arts,
Anthropology, 1977
University of Wisconsin-Madison, Master of Arts,
Anthropology, 1982

MEMBERSHIP IN PROFESSIONAL SOCIETIES AND ORGANIZATIONS

The Iowa Archaeological Society
The Galena Historical Society
Wisconsin Archaeological Society (Advisory Council)
Iowa Historical Society
La Crosse Area Archaeological Society

PAPERS PRESENTED

- 1981 The Prairie Phase, an "Early Woodland" Manifestation in the Upper Mississippi River Valley. Midwest Archaeological Conference, Madison, Wisconsin. Junior participant with Dr. James Stoltman and James L. Theler. Paper delivered by Dr. James Stoltman.
- 1981 Preliminary Report on an Archaeological Survey of Pool 12, Upper Mississippi River. Midwest Archaeological Conference, Madison, Wisconsin.
- 1981 Report and Discussion of Archaeological/Geomorphological Interpretations of Pool 12 in the Upper Mississippi River Valley. Wisconsin Archaeological Society, November meeting, Waukesha, Wisconsin.
- 1982 The La Crosse Area Archaeological Society's Excavations at the Dahl Site. La Crosse Area Archaeological Society, September meeting, La Crosse, Wisconsin.

PUBLICATIONS

- 1977 Radiocarbon Dates for Wisconsin, 1976, A Second Compilation. The Wisconsin Archaeologist, 58(2):84-150.
- 1982 Wisconsin Radiocarbon Update: 1981, The Wisconsin Archaeologist, Vol. 63 (2).

TECHNICAL REPORTS

- 1981 Archaeological Investigations on Private Lands in the Lowland Floodplain near Prairie du Chien, Wisconsin. State Historical Society of Wisconsin. Section of Comprehensive Report on Archaeological Investigations of the Prairie du Chien locality, Crawford County, Wisconsin, prepared by Dr. James B. Stoltman, James L. Theler, Constance Arzigian and Jeff Behm.

- 1981 Preliminary Investigations: Archaeological and Sediment Geomorphology, Navigation Pool 12, Upper Mississippi River. Great Lakes Archaeological Research Center, Reports of Investigations No. 115 (3 volumes). Senior author with Dr. David Overstreet.
- 1982 Archaeological Investigations in the Lowland Floodplain of Navigation Pool 10 near Prairie du Chien, Crawford County, Wisconsin. Master's Thesis, University of Wisconsin-Madison, Department of Anthropology.
- 1982 Archaeological Investigations at The Dahl Site (47Lc148), Mississippi Valley Archaeology Center, Inc. Reports of Investigations No. 1. Senior author with Dr. James P. Gallagher.

ARCHAEOLOGICAL FIELD/LABORATORY EXPERIENCE

- 1973 Crew member, Archaeological Field School, Hixton Quarry Site, University of Wisconsin-Waukesha. Dr. David F. Overstreet, Director.
- 1974 Crew member, Byron Power Plant Project, First and Second Phase Testing, University of Wisconsin-Milwaukee. Robert Birmingham, Director.
- 1975 Crew member, Apostle Island Survey, Beloit College. Dr. David F. Overstreet, Director.
- 1975 Crew member, Marina Site Excavation, Madeline Island, Wisconsin, Beloit College. Robert Birmingham, Director.
- 1975-1976
Lithic Analysis, Apostle Island Survey, Beloit College. Dr. David F. Overstreet, Director.
- 1976 Crew member, Jones Bluff Survey (Alabama River), Office of Archaeological Research, University of Alabama. C. Oakly and M. Watson, Directors.
- 1976 Crew member, Subassistant, Phipps Bend Excavations (Tennessee), Office of Archaeological Research, University of Alabama. Robert Lafferty, Director.
- 1976 Crew member, Rock River Survey (Rock Island County, Illinois), University of Wisconsin-Milwaukee. Robert Birmingham, Director.
- 1977 Crew member, Historic Site Survey, Fox River Watershed, Waukesha County, Wisconsin. Dr. David F. Overstreet, Director.
- 1977-1979
Research Assistant, the Great Lakes Archaeological Research Center, Waukesha, Wisconsin. Project participation included:
- Archaeological Inventory and Evaluation of Weston, Unit 3 Power Plant, Marathon County, Wisconsin.
 - Archaeological Inventory of the Sanitary Sewer Collection System and Waste Disposal Treatment Facility: Town of Norway Sanitary District No. 1, Racine County, Wisconsin.
 - Archaeological Inventory and Evaluation of the Proposed Sewage Treatment Facilities at Mukwanago, Waukesha County, Wisconsin.
 - An Archaeological Inventory and Evaluation: The Proposed Waukesha County Technical Institute Expansion Project.
 - An Intensive Archaeological Survey, Milan-Big Island Phase II Study, Rock River, Illinois.
 - Archaeological Inventory and Evaluation: Brillion, Wisconsin Wastewater Treatment Facilities.

- Archaeological Inventory and Evaluation of Butte des Morts Utility District, Menasha (West).
- Cultural Resource Inventory of the Chippewa River in Sawyer County, Wisconsin.
- Cultural Resources Reconnaissance, Loves Park, Illinois, Interim 2, Flood Feasibility Study.
- Archaeological Inventory of the Proposed Areas of Modification, Black River Falls Mine, Jackson County, Wisconsin.
- Archaeological Inventory of the Sand Hill Estates and Hillside Homes Community, Oneida, Outagamie County, Wisconsin.
- Archaeological Inventory of the Proposed Stabilization Ponds, Lift Station and Interceptor Route, Mellen, Wisconsin.
- Archaeological Inventory of the Cherryland Airport Extension, Door County, Wisconsin.
- Archaeological Inventory of the Proposed Realignment of County D, Florence County, Wisconsin.
- Cultural Resource Evaluation of the Sturgeon River Wilderness Study Area, Ottawa National Forest.
- Archaeological Inventory of the Proposed Outagamie Airport Industrial Park Site.
- Cultural Resource Evaluation of Two Chequamegon National Forest Wilderness Study Areas: Flynn and Round Lakes.
- Archaeological Inventory and Evaluation of the Proposed Wastewater Treatment Facilities at Cambellsport, Fond du Lac County, Wisconsin.
- Archaeological Inventory and Evaluation of the Proposed Dredging Deposition Areas at Muskego, Wisconsin.
- Initial Archaeological Inventory of Chequamegon National Forest in Northwestern Wisconsin.
- Archaeological Inventory and Evaluation of the Proposed Wastewater Treatment Facilities at Columbus, Wisconsin.
- Archaeological Inventory of the Proposed Wisconsin Public Service Corporation Ash Disposal Site, Brokaw, Marathon County, Wisconsin.
- Cultural Resource Inventory and Evaluation of the Proposed Expansion of the Wastewater Treatment Facilities at Monroe, Green County, Wisconsin (Field Supervisor).
- Archaeological Inventory of the Proposed Electrical Power Service Line from Prairie du Chien to Indian Isle, Crawford County, Wisconsin, Field Supervisor.
- Archaeological Inventory and Evaluation of the Proposed Wastewater Treatment Facilities at Friesland, Columbia County, Wisconsin.
- Archaeological Inventory of the Proposed Hidden Harbor Development at Fish Creek, Door County, Wisconsin.
- Salvage Excavations at the Convent Knoll Site (47Wk327), a Red Ochre Cemetery at Elm Grove, Waukesha County, Wisconsin.
- Archaeological Excavation at the Mile Long Site (47Wl110), Lake Delevan, Walworth County, Wisconsin.
- Archaeological Inventory and Evaluation of the Proposed Wastewater Treatment Facilities at Boscobel, Grant County, Wisconsin.
- Archaeological Inventory of the Proposed Wastewater Treatment Facilities at Palmyra, Jefferson County, Wisconsin.
- Archaeological Recovery at 11R1337, an Early Middle Woodland Shell Midden in East Moline, Illinois.

- Cultural Resources and Assessment: Butternut and Franklin Lakes, Nicolet National Forest.
 - Archaeological Survey of the East Shore of Lake Winnebago: 1979.
 - Archaeological Survey of the Green Bay Coastal Corridor (Field Supervisor).
 - A Cultural Resource Survey of Proposed Undertakings Nicolet National Forest, Wisconsin.
- 1980 Research Assistant, University of Wisconsin-Madison, Laboratory of Archaeology. Project participation included:
- Archaeological Investigations in the Prairie du Chien Locality, Crawford County, Wisconsin.
 - Supervisor, University of Wisconsin-Madison, Field School in Archaeology.
 - Archaeological Investigations on Private Lands in the Lowland Floodplain of the Upper Mississippi River near Prairie du Chien, Wisconsin.
- 1981 Research Assistant, the Great Lakes Archaeological Research Center, Waukesha, Wisconsin. Project participation included:
- Archaeological Testing of an Early Logging Camp (47Fr142) Forest County, Wisconsin.
 - A Cultural Resource Survey at Kinickinic State Park, Pierce County, Wisconsin.
 - Archaeological Survey of Pool 12, Upper Mississippi River Valley (Field Supervisor).
 - Archaeological Testing of Two Prehistoric Sites (47Fr141, 47Fr143), at Oak Lake in Northcentral Wisconsin.
- 1982 Field Director. Archaeological Investigations at The Dahl Site (47Lc148), La Crosse County, Wisconsin.
- 1982 Co-Field Director. Archaeological Survey and Excavations at the Sand Lake Site (47Lc44), La Crosse County, Wisconsin.
- 1982 Field Director. La Crosse County Archaeological Survey, 1982.